

JPRS 74562

13 November 1979

East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1952



FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available from Bell & Howell, Old Mansfield Road, Wooster, Ohio 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

REPORT DOCUMENTATION PAGE		1. REPORT NO. JPRS 74562	2.	3. Recipient's Accession No.																		
4. Title and Subtitle EAST EUROPE REPORT: ECONOMIC AND INDUSTRIAL AFFAIRS, No. 1952			5. Report Date 13 November 1979																			
7. Author(s)			6.																			
9. Performing Organization Name and Address Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201			8. Performing Organization Rept. No.																			
10. Project/Task/Work Unit No.			11. Contract(C) or Grant(G) No. (C) (G)																			
12. Sponsoring Organization Name and Address As above			13. Type of Report & Period Covered																			
14.			15. Supplementary Notes																			
16. Abstract (Limit: 200 words) This serial report contains information on economic theory, organization, planning and management; major agreements on and development of trade within CEMA and outside the Bloc; articles on all aspects of the materials, services, machine, electronics, and precision equipment industries; and concepts and attainments in agriculture, forestry, and the food industry.																						
17. Document Analysis a. Descriptors <table border="0"> <tr> <td><input checked="" type="checkbox"/> International Affairs</td> <td>Economics</td> </tr> <tr> <td><input type="checkbox"/> Albania</td> <td>Technological</td> </tr> <tr> <td><input type="checkbox"/> Bulgaria</td> <td>Agriculture</td> </tr> <tr> <td><input checked="" type="checkbox"/> Czechoslovakia</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> German Democratic Republic</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Hungary</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Poland</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Romania</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Yugoslavia</td> <td></td> </tr> </table>					<input checked="" type="checkbox"/> International Affairs	Economics	<input type="checkbox"/> Albania	Technological	<input type="checkbox"/> Bulgaria	Agriculture	<input checked="" type="checkbox"/> Czechoslovakia		<input checked="" type="checkbox"/> German Democratic Republic		<input checked="" type="checkbox"/> Hungary		<input checked="" type="checkbox"/> Poland		<input type="checkbox"/> Romania		<input checked="" type="checkbox"/> Yugoslavia	
<input checked="" type="checkbox"/> International Affairs	Economics																					
<input type="checkbox"/> Albania	Technological																					
<input type="checkbox"/> Bulgaria	Agriculture																					
<input checked="" type="checkbox"/> Czechoslovakia																						
<input checked="" type="checkbox"/> German Democratic Republic																						
<input checked="" type="checkbox"/> Hungary																						
<input checked="" type="checkbox"/> Poland																						
<input type="checkbox"/> Romania																						
<input checked="" type="checkbox"/> Yugoslavia																						
b. Identifiers/Open-Ended Terms																						
c. COSATI Field/Group 5C, 13I																						
18. Availability Statement Unlimited Availability Sold by NTIS Springfield, Virginia 22161			19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 70																		
			20. Security Class (This Page) UNCLASSIFIED	22. Price																		

EAST EUROPE REPORT
ECONOMIC AND INDUSTRIAL AFFAIRS
No. 1952

CONTENTS	PAGE
INTERNATIONAL AFFAIRS	
Hungarian-Romanian Economic Relations Described (Jozsef Sumi; KULGAZDASAG, Aug 79)	1
CZECHOSLOVAKIA	
Economic Experiment in Design Organization Evaluated (Vladimir Bradik, Emanuel Zabloudil; HOSPODARSKE NOVINY, 21 Sep 79)	5
GERMAN DEMOCRATIC REPUBLIC	
Briefs GDR-Netherlands Government Commission	10
HUNGARY	
Planning Official Discusses Economic Regulating System (Laszlo Horvath; NEPSZABADSAG, 23 Sep 79)	11
Rate of Exchange Policy Examined (Ferenc Bartha; KULGAZDASAG, Sep 79)	16
Racz Discusses Wage Distribution, Effects on Incentives (Albert Racz; TARSADALMI SZEMLE, Sep 79)	32
POLAND	
Energy, Transport Shortages SAP Cement Industry (Andrzej Chmielewski; ZYCIE GOSPODARCZE, 14 Oct 79) ...	48

CONTENTS (Continued)

Page

YUGOSLAVIA

Ferrous Metallurgical Capacities, 1975-80 (Aleksandar Cavic; CELIK, Jul 79)	53
--	----

HUNGARIAN-ROMANIAN ECONOMIC RELATIONS DESCRIBED

Budapest KULGAZDASAG in Hungarian No 8, Aug 79 pp 37-39

[Article by Jozsef Sumi]

[Text] Foreign trade is one of the most dynamic sectors of the Romanian national economy. Between 1971 and 1975 national income grew by 71 percent, national product by 65 percent and foreign trade by 132 percent. (This was also affected by increased price levels.) The projected growth in foreign trade during the present five year plan is 90 to 101 percent. In our foreign trade Romania occupies 8th place (5th place among CEMA countries). In view of the fact that we are neighboring countries and our mutual trade represents only about 3 percent of our total foreign trade, we cannot be satisfied with the present size of our trade with one another. Thus, we must seek an answer to the question of what could and should be done to ensure that the 400 million ruble reciprocal trade is increased further.

The Romanian national economy developed at a rapid pace after the liberation; before, it had been a backward agrarian country. The five year plans between 1950 and 1975 have transformed it into an industrial-agrarian country with a large and modern industrial capacity as well as a highly developed agriculture. It has expanded an enormous effort to achieve rapid development of its productive forces: more than one third of the national income was used for accumulation. The production of Romanian industry today is 42 times greater than in 1938; national income increased 13-fold since 1950.

During the first 3 years of the present five year plan Romania increased its industrial output by a yearly average of 11 percent. On the basis of the targets of the five year plan, the increases will be 61 to 68 percent for national income, 62 to 70 percent for industrial production, and 28 to 44 percent in agricultural production. The growth of certain highly important sectors is especially rapid; i.e., the growth target for the chemical industry is 103 to 115 percent, for machine industry 75 to 81 percent, for ferrous and non-ferrous metallurgy 73 to 81 percent. Within the machine industry, the fastest growing sectors are the manufacturing of electrical motors, automated units, computer hardware, metal-working machine tools, complete factory equipment, motor vehicles, river boats and sea vessels. The share of the chemical and machine industries in industrial production

will grow from 44 percent in 1975 to between 55 and 60 percent in 1990, to be set against the rapid development of other industrial sectors. Great importance is being given to a more uniform distribution of industrial capacities. The target is at least 10 billion leis worth of industrial production by each of the 39 counties in 1980. Before the start of the present five year plan in 1975 the industrial production of the 39 counties and Bucharest was 587 billion leis; thus, the average county (including Bucharest) produced 14.7 billion leis. Nevertheless, only 21 counties had production exceeding 10 billion leis. As a result, the yearly industrial production growth of the less developed counties must reach an average of 15 to 20 percent or more. The last available statistics show that in 1977 26 counties had industrial production exceeding 10 billion leis and the average increased to 18.8 billion leis.

Along with the rapid development of productive forces there has been a fundamental change in the social structure of Romania. In the past, peasantry represented approximately two thirds of the labor force: the proportion today is 30 percent and it will keep declining at a significant pace in the future, according to the plans. The development of productive forces is closely related to the rising living standards of the population. Real income today is approximately five times larger than in 1950 and will increase by 32 percent during the current five year plan.

Trade Developments

Reciprocal trade between our nations has increased significantly during recent years: the trade target for 1979 is 400 million rubles, representing an 8 percent increase relative to last year.

Trends in Hungarian-Romanian Trade (1970=100)

	Totals	Romanian Exports	Hungarian Exports
1970	100,0	100,0	100,0
1971	126,2	113,8	142,6
1972	115,1	94,5	142,1
1973	147,7	137,5	161,1
1974	169,7	132,1	219,3
1975	241,3	231,0	355,0
1976	297,5	263,2	342,6
1977	345,5	304,8	399,1
1978	373,6	338,3	420,1

Between 1970 and 1978 Romanian foreign trade increased by 236 percent; during the same period, trade with our country increased by 274 percent. Thus, Hungary's share of Romanian foreign trade increased from 2.9 percent in 1970 to 3.2 percent. These numbers show substantial progress, but the results are still unsatisfactory.

The most dynamic increase within our bilateral trade occurred in the area of machine industry products. At present, 54 percent of Romanian exports and about 62 percent of Hungarian exports is machine industry products.

The most important Romanian machine industry export products are: machine tools, oil and construction industry machinery, agricultural machinery and tractors, diesel hydraulic engines, railroad freightcars, road transportation vehicles, machine industry consumption goods. The components of Hungarian machine industry exports are: machine tools, metallurgical equipment, floating cranes, light industry and chemical industry machinery, instruments, medical and x-ray equipment, agricultural machinery, road transportation vehicles, engines and transaxles for motor vehicles. There is a significant amount of trade in chemicals, ferrous metallurgy products, aluminum products, truck tires and consumer products; border trade is also substantial. Among Romanian exports one must mention natural gas, salt, building materials and furniture; among Hungarian exports, drugs and pharmaceutical base materials, various types of food, e.g., refrigerated fish, poultry, salad oil and margarine. We have a great many traditional articles; however, with the changes in production structure there will be modifications in trade patterns. On both sides one must expect development of opportunities and demands. Dynamic development is most clearly visible in the traditional areas of foreign trade, i.e., bilateral sale of goods. There are much more modest successes in the more intensive areas of trade relationships, such as specialization, production and third-market cooperation. There has been some progress in this area during recent years; however, we feel that there are many opportunities which have not been opened up yet.

Our Most Important Tasks

If we intend to continue the dynamic development of our trade (and this is what both of us want) then we must both intensify our analysis of the other's trade goals. Romania intends primarily to increase the share of machine industry products within its exports; it wishes to import materials and the types of machinery and equipment which it cannot produce domestically. Although Romania is rich in natural resources, its aim is to get the most for its natural resources by increasing the added value of its export products through additional processing. These goals place severe limitations on our export opportunities, since our country is poorer in natural resources. Romania is promoting cooperative production arrangements, specialization agreements and long range contracts with a view toward intensity, efficiency and stabilization of relations.

One is certainly entitled to ask: if both countries want to develop our bilateral economic relations, why is it that our results are not better? What are the most important tasks to ensure the growth of trade? First of all there is a need to improve market research. The rapid development of our nations demands more and better information regarding our opportunities and requirements. National authorities pinpoint those areas which are most promising for the development of cooperation. More detailed analysis and implementation of these opportunities belongs in the sphere of individual enterprises. We must both promote good mutual information through the development of every type of information resource. The press may be utilized; market research trips must be more frequent. We also expect a great deal

from the activities of the national branches of the chambers of commerce and the organizers of symposia, technical and economic shows and exhibitions. We must improve and intensify the relations between our economic units. We both spent hard-earned money on a number of capitalist patents and licences (not the same ones, unfortunately); their economical utilization needs to be improved by mutually expanding their applications. An increasing portion of our trade consists of so-called "hard goods", including many articles which are close to world standards in terms of quality and up-to-date technology. This is what we both need the most; trade in these goods must be expanded through better information for producers and consumers and conversion of productive capacities.

The main opportunity for further dynamic increases in bilateral trade exists not in traditional fields but also in the development of cooperative ventures in the areas of production and marketing. This requires more thorough and timely information on each other's plans, demands and supplies; however, this is not enough. We need to pay increased attention to punctual performance of obligations. Without this, it is not possible to expand cooperation. This means increased responsibility and risk. Late shipments or deficient quality will lead to increasingly harmful consequences. There is a great deal to be done in this area.

In conclusion, I would like to describe the most recent changes in the Romanian economic mechanism. Many people in our country interpreted these to mean that some kind of new mechanism is being introduced. This is in fact not true and, as far as I know, is not in the cards. The Romanian leadership is emphasizing its intention to develop the mechanism on the basis of the earlier principles to the extent required by the development of productive forces and, more importantly, production conditions. The plans have not yet been fully implemented. They are being introduced gradually and very carefully. The basic principle (and this is not new) is the perfection of the planning and direction of all economic activity, increased participation of workers in the direction of enterprises, expansion of the initiative and range of action of economic units and enterprises and improving the efficiency of production. The jurisdiction of enterprises regarding planning and implementation has expanded; financial controls have become stricter. For example, planning and measurement of net production value has been introduced everywhere and the principle of self-financing has been expanded in order to improve efficiency, profitability and productivity. Development of the economic mechanism may also have a generally favorable effect on the expansion of bilateral trade. It improves the opportunities open to enterprises, encourages initiative, provides incentives and makes it possible to measure the efficiency of relations. Increased profit incentives of Romanian enterprises are bringing the thinking of our enterprises closer together and this can also have a positive effect on the demand for the development of mutually fruitful relations as well as the realization of opportunities.

9164

CSO: 2500

ECONOMIC EXPERIMENT IN DESIGN ORGANIZATION EVALUATED

Prague HOSPODARSKE NOVINY in Czech 21 Sep 79 p 7

[Article by Engr Vladimir Bradik and Emanuel Zabloudil, Barumprojekt, Gottwaldov: "Experiences From Implementation of Comprehensive Experiment in Design Organization"]

[Text] Among the 12 selected experimenting economic production units are the Czech Rubber and Plastics Works in Gottwaldov, an organizational part of which is the Barumprojekt design and engineering organization. This organization together with Chempik Bratislava are the only design organizations which verify the principles of the experiment.

In view of the fact that the general principles of the experiment focus on the problems of economic production units, production enterprises and production organizations, they do not take adequately into account the specific features of design organizations. On the contrary, VHJ CZGP [Czech Rubber and Plastics Works economic production unit], beginning 1 January 1978, has been paying obligatory levies from property on behalf of our organization too, although all design organizations are exempted from paying levies from property.

The second different feature is the fact that the experiment pays only marginal attention to the problems of capital construction, which is the principal subject of work of every design organization. Although the introduction of the category of investment projects with limits set in advance makes sense for the process of capital construction, it does not affect its material problems. Its primary purpose is to exercise pressure on more effective management of VHJ [economic production units] or production enterprises, and thus to increase the amount of funds allocated from profits to the development fund.

These two specific features significantly marked both the period of preparation for the implementation of the experiment and the first year of its verification.

The economic results in the first year of practical verification of the principles of the experiment were very good in our organization. The rapid, dynamic development of volume indicators, substantial reduction of planned losses, processing of preparatory and design documentation within the specified deadlines necessary for the preparation and smooth course of construction work, all make it clear that our organization not only met, but actually surpassed the plan targets. These really positive features, however, are not only the result of application of the experiment's principles, but also reflect the logical continuation of constantly good economic results achieved by our organization in the past as well. We cannot, therefore, draw from them a clear-cut conclusion that the principles of the experiment should be applied as they are, that no changes in them are necessary and that they fully take into account the specific features of the design organization.

Principles of Material Incentives

In connection with the plan, material incentives should exercise effective economic pressure on the systematic fulfillment of the basic mission of the design organization on the necessary technical-economic and qualitative level at any time. In evaluating the effectiveness of the experiment, we must, therefore, give an answer to the question in the first place of whether the manner of its application economically forces our organization to discharge this basic mission.

The scope of material incentives as applied in our organization in 1978, and enlarged this year, essentially meets this purpose. The planned volume of the incentive component of wage funds including its potential increase by 1 percent of the total amount of wages is fully linked to the fulfillment of the organization's material tasks. It must be pointed out in this context, however, that it is not always so, either in the formulation of specific tasks in the annual operational plan or in the formulation of tasks underlying the annual bonus for the organization manager. But in comparison with the period preceding the verification of the experiment's principles, the form of material incentives applied in our organization represents significant progress and there we see the fundamental positive feature of the period surveyed.

This statement does not mean, however, that the respective provisions cannot be improved upon. The link between the entire incentive wage component and the fulfillment of the organization's material tasks as applied now forces the organization to fulfill its tasks in the required time. This definitely promotes the process of capital construction, but the question of how effectively and qualitatively is dealt with by the incentive wage component only marginally. Its payment thus depends upon the indicators characterizing the internal economics of the design organization, that is, its output and level of economic results.

The indicator of the design organization's own output neither does--nor can--promote a more efficient processing of design documentation because material consumption does not play a substantial role in the cost structure. Although

the indicator of the organization's output essentially substitutes for the indicator of overall output, it exercised favorable influence on the organization's economic results last year. Likewise, the indicator denoting that the planned losses were not exceeded characterized economic management of the organization in the given year and the necessity of its observance in the payment of a higher incentive wage component than anticipated by the plan. It forced the organization to surpass the output targets, in other words to increase the volume of labor expended and labor productivity.

Generally we can say that both indicators, in which the payment of the incentive wage component depends really characterize the organization's economic management and no changes in them are required in the future. There has been, however, a change in the application of these indicators this year because a zero economic result has been registered in the organization's plan for this year whose fulfillment can be evaluated not in relative terms, but only in absolute terms. For this reason, the application of the above indicators has been modified in the following way:

--if the economic result plan is not met, the incentive wage component is reduced by Kcs 10 for each Kcs 100 of nonfulfillment;

--if the organization's output plan is not met, the incentive wage component is reduced by 0.05 percent for each 0.10 percent of nonfulfillment;

--the overall reduction due to the nonfulfillment of indicators must not exceed 5 percent of the incentive wage component.

Search for Appropriate Criteria

Although the level of management of a design organization is an important measure of efficiency of labor expended, it is not the decisive criterion.

The fundamental criterion for the evaluation of quality and efficiency of labor expended in the design organization is the social effectiveness of useful values produced in individual operations and newly constructed or reconstructed plants for which the organization processed design documentation. It is clear from the entire process of capital construction that the application of this criterion of efficiency and quality is correct. In terms of time, however, it is too remote from the day on which the design organization completed processing of preparatory or design documentation. For this reason, additional criteria must be found which would serve as the basis for the evaluation of efficiency and quality of work immediately after its completion.

The search for such criteria is one of the basic problems of management. Although we tried to find these criteria and to apply them in intracenter enterprise management last year, we did not achieve significant progress.

It became clear that the best criterion is the evaluation of whether or not the design organization adhered, in the final stage of processing of preparatory or design documentation, to the basic technical-economic indicators of

the immediately preceding stage. Under the given conditions of preparation of construction projects, this method of evaluating efficiency and quality is objectively satisfactory for the evaluation of the original project because the technical-economic indicators of this original project are compared with the protocol of approval on the design task. It is more difficult to use this method of evaluation in the evaluation of individual stages of preparatory documentation, although objective criteria can also be found in this case.

In other words this means that the remaining 2 years of application of principles of the comprehensive experiment in efficiency and quality control should be used by our design organization for finding, in cooperation with the supervisory organ, the way in which efficiency and quality of expended labor may best be evaluated.

Share in Production Fund

Under the conditions of the experiment, up to 2 percent of the total amount of wages paid can be allocated to the fund of cultural and social needs. In other words, the fund is replenished in the same way as in the previous periods. The experiment, however, makes it possible for VHJ--provided the quality of products is improved and foreign trade effective--to increase the allocation to this fund by as much as 0.8 percent of the total amount of wages paid.

The VHK CZGP general directorate detailed these principles for individual production enterprises and special-purpose organizations, but the design organization was not given the possibility of increasing allocations to this fund. Yet, it is quite obvious that the design organization exercises direct influence both on the quality of manufactured products and effectiveness of foreign trade even if this influence cannot be quantified in economic terms.

However, as the increase in the quality of manufactured products and effectiveness of foreign trade are the criteria of quality and efficiency of labor expended by the production enterprises, the design organization also should be given material incentives in this respect. Although the quality and efficiency of labor expended by the design organization are still open and to some extent even controversial questions, it would be expedient in the course of this experiment to really experimentally verify the effect of some of the proposed methods of this evaluation.

We therefore recommend also making it possible for our design organization to participate in the increased allocations to the fund of cultural and social needs of VHJ CZGP up to the limit specified by the supervisory organ in the following instances:

- a. in processing the initial construction project falling in the category of obligatory tasks of the state plan, construction projects centrally evaluated or other selected construction projects, provided that it met the mandatory technical-economic indicators listed in the protocol of approval on the design task:

b. in processing the design task for the construction project falling in the category of obligatory tasks of the state plan or a construction project centrally evaluated, provided that it adhered to the selected technical-economic indicators listed in the investment plan.

Inventory Control

The experiment pays considerable attention to inventories and through a number of indicators (profitability in relation to the production funds, rate of inventory turnover) contributes to their more efficient administration.

The application of these principles within our economic production unit does not take into account the specific nature of inventories in the design organization and is essentially the same as in production enterprises. As the situation in other design organizations in the CSSR is similar to ours, we presume that this experiment could be used for verification of a different method of inventory control in the design organizations. The essential point is that in the design organizations an overwhelming part of inventories (60-70 percent) consists of items of nonmaterial nature, that is design documentation being processed. The amount of this processing work is not a sign of good or bad management because it depends exclusively upon the structure of the plan of design work.

We, therefore, recommend exempting from inventory control in the design organization unfinished production and leaving and including in inventory control only the material supplies (office supplies and durable goods) and not to apply the indicator of inventory turnover in detailing the plan. An absolute limit should, therefore, be set for the supplies under inventory control. Even under these changed conditions, supplies should be financed in the same way as in the past.

We are aware of the fact that the proposed method of inventory control would have to be discussed with the financing SBSC [Czechoslovak State Bank] branch with the proviso that this is the experimental verification of one of the proposed variants of inventory control in design organizations. The proposed method of inventory control will simplify both the detailing and checks on the fulfillment of the plan in our organization. At any rate, it will have no negative effect on the organization's economic results and will contribute to the stabilization of the value part of the annual operational plan.

10501

CSO: 2400

GERMAN DEMOCRATIC REPUBLIC

BRIEFS

GDR-NETHERLANDS GOVERNMENT COMMISSION--On the occasion of the 35th session of the joint GDR-Netherlands Government Commission Dr Eduard Schwierz, GDR deputy foreign trade minister, has received for a talk J. W. A. Huibregtse, head of the Dutch delegation and director general at the Dutch Ministry of Economic Affairs. Both sides agreed that the economic relations should be further improved and expanded. They discussed proposals to this end whose implementation will lead to an essential expansion of the goods exchange. The meeting was attended by Adrianus Van der Maade, ambassador of the Kingdom of the Netherlands to the GDR. [AU251620 East Berlin NEUES DEUTSCHLAND in German 24 Oct 79 p 2 AU]

CSO: 2300

PLANNING OFFICIAL DISCUSSES ECONOMIC REGULATING SYSTEM

Budapest NEPSZABADSAG in Hungarian 23 Sep 79 p 3

[Article by Dr Laszlo Horvath, deputy chairman of National Planning Offices:
"In Service to Efficiency"]

[Text] Modification of the Economic Regulatory System

Our national economic plan for this year in accordance with last December's Central Committee resolution focused its attention on the improvement of the foreign trade balance situation and designated the improvement of economic operating efficiency as an important task. In order to achieve our further goals it was also necessary to modify the economic regulatory system. The modified regulatory system will go into effect as of 1 January 1980. The Council of Ministers recently accepted the guidelines for this and specified the more important changes. The details are available to the experts, a release has been published about this in the official publications. Within the framework of this article we will deal only with the main characteristics of the system, placing the emphasis on the changes.

Producer Prices

The most and also the most important changes in the modified regulators are in those which specify the method of arriving at prices and the price mechanism to be followed. Analyses prior to working out the regulatory system have proven convincingly that the basic principles of the economic control system introduced in 1968 were correct and are also correct today. However, many problems were caused because at the same time the reform was introduced, there was only a slight change in the price system. Both then and later, we endeavored to correct producer prices with greater or lesser delays. But because of this the value-measuring role of prices decreased or became distorted, consequently profit also could not express the efficiency of production or economic operation. Our prices also did not relay the foreign market's price relationships, therefore, the enterprises could not know whether their products which could be produced profitably under domestic price conditions could be sold advantageously on the foreign market.

As of 1 January 1980 most prices applicable to industry will be so-called competitive prices. In this, the producer cannot pass on his unjustified expenses to the buyer because the basis of the prices will be the export price, that is, at what price the enterprise will be able to sell its products on the world market. But we must consider that not all enterprises will be able to conform to the same degree and at the same speed to the world market, therefore, in the prices which become effective as of 1 January 1980 we will have to permit certain deviations, but the enterprises will have to eliminate them in 4 to 5 years.

The principle of competitive prices cannot be applied in the economy as a whole, for example, in the cases of agriculture, construction industry, services, etc. But we are examining more scrupulously the formation of prices in these cases also, and we can accept only those costs in prices which are characteristic for the good enterprises of the specific area of activity, and the excessive expenditures of some enterprises cannot be considered.

The method of the pricing mechanism, that is, of the continuous formation of prices will be flexible, that is, prices will follow the world market's price changes. Naturally, we have to see to it that the world market's speculative price fluctuations should not spiral into domestic prices, but the movements which promise to be lasting must by all means be made felt in the producer price system for the purpose of correctly orientating the producing enterprises.

Being Interested in Profits

All these things mean that beginning with 1980 the profit included in the prices will better express the differences in efficiency in producing and economic operating activities. This change makes it possible for us to really appropriate for profits the role we had in mind in judging activities when the reforms were introduced; we will be able to link the enterprise's and the individual's interests to profits much more definitely. In other words: the regulations which will become effective in January use being interested in profits more effectively.

With the new prices generally, there will be no need for income regulations to modify the results of economic operation by taking away and redistributing incomes. Making it operate in the new media it appears that the present system of income regulations is appropriate for the goal, and the only need is to cut down on exemptions and to correct their extent. Enterprises will continue to be able--after paying their taxes--to decide independently about distributing their funds. The general tax-on-profits system to be paid on profits also will not change. The rate of tax is expected to be about 40 percent and will be no more than 45 percent. It is appropriate to determine municipal and community development contributions at 10 percent. The rate of progressive taxation of the distribution fund will also remain mostly unchanged.

Due to expected more frequent price changes, the formation of reserve funds is an essential element of income regulation. Besides the compulsory reserve fund, the extent of which is expected to decrease compared to the present--the rules of using it will change only barely--it will also become possible for the enterprises to form a price-differential reserve fund. However, the rules for forming and using the benefit and cultural funds will not change.

Wage Regulation

The system of wage and income regulation will not change fundamentally either. Without any changes, the wage fund tied to performance, in some cases wage levels and central wage regulations will be the main formats. We favor wage-fund regulations in all professions where being interested in profits is characteristic. In the case of wage-fund regulation tied to performance, each percentage point of increase in the wage development index will make a 0.2 to 0.3 percent wage improvement possible without contribution requirements. In the case of using a wage fund larger than this, a wage-development contribution has to be made. The rate is the same also for wage-level regulations tied to performance.

For enterprises which operate well, the opportunity for wage increases without additional wage-development contributions will increase: the wage fund can be increased 3 percent more without making contributory payments over the rate calculated on the basis of the performance index, but in the case of wage increases exceeding 8 to 10 percent contributory obligations will have to be met in both wage forms. The central wage fund or wage-level regulation will differ only in its extent from the system which has been used until now--this form of regulation can also be combined with relative elements. Accumulating wage reserves will continue to be desirable. It is a new element in the system that it will make it possible to minimally raise wage levels temporarily to the extent determined in the annual plan, if the wage could not be increased on the basis of the wage-development index. The purpose of this measure is for the enterprise to be able to conform with the stricter regulation without causing damage to the collective.

Besides efficiency and speed, the requirements of thriftiness will also have to be given effect in development activity. Resources must be concentrated on developing a more efficient production structure. Therefore the goals of group-goal-oriented state subsidy and the extent of state subsidy will decrease. A new element in the system, supplementary fund grants, can be given to dynamically growing enterprises where the profitability of investments is great and the enterprise has no more monetary means for investments. The enterprise has to pay this back over a longer period of time from its profit before taxes.

Foreign trade regulators will be modified to a greater extent. This is understandable since one of the main economic policy tasks in the coming years is to improve the foreign trade balance.

For their export, enterprises can receive only a refund for producer's differential sales taxes they paid. State assistance can be given in a narrow area and temporarily for 4 to 5 years for the purpose of assisting in the structure modification, to conform to the requirements of foreign markets.

The customs duty system to protect and provide incentives for our economy will continue to be in operation and its rates will change in accordance with our international obligations. The foreign-currency exchange rates will also modify. From now on the exchange rates will flexibly follow the changes of convertible foreign currencies among themselves.

Enterprise's Behavior

We must emphasize that the modified regulatory system will greatly change the economic environment of the enterprises. Enterprises must thoroughly prepare themselves for this. It is important that without delay they should continue or begin their actions to increase efficiency, primarily to change their production structures, and decrease costs and to put the viewpoints of economy into effect in all areas. The economic operating conditions are much stricter, but it is hardly debatable that each enterprise has significant reserves in the areas of increasing productivity, decreasing materials and energy usage, work organization, firming up work discipline, rational inventory management, etc. Under the current regulators and basic approach, these greater or lesser laxities could be tolerated. Today the Hungarian national economy has the capacity, cadre staff and technical equipment to stand its ground even in world market competition. We must make much better use of the opportunities hidden in rationalization, organization, cutting down uneconomical production and we must carefully choose among the development goals. The main viewpoint is that the product brought into existence with the new capacities, with research should really be saleable--primarily on the foreign market--and should produce a profit for the enterprise.

The things to be done are multiplying, fulfilling this year's plan is an appreciable task, and we must get ready for the 1980 annual plan. The modified regulators create a changed environment--carrying out the new kind of tasks will require a new style of leadership which conforms to the requirements. The enterprises cannot expect the state to solve their problems. Under the increasingly more difficult economic circumstances, even the state does not have at its disposal the external resources to finance its uneconomical activity. Irreparable delay may easily occur if, instead of seeking self-sufficient methods of solution, time passes with justifying requests for help and with explaining the reasons.

Introduction of the modified regulatory system also requires great efforts from the state's organs. The new legal statutes which specify the starting prices, regulations and their extent will have to be worked out for the most part by the end of October, but at the latest by the time the 1980 annual plan is approved.

Presumably the regulators will have to be adjusted to some extent in 1980 in harmony with the Sixth Five-Year Plan, but it cannot be expected that the basic principles of the regulation will change, that the economic conditions will relax.

A new style is also needed in governmental work, in controlling-invervening activity. On the one hand, to aid in the enterprise's independence, to enliven and bravely reward the desire to embark on ventures, and, on the other hand, to more effective control, to well-thought-out but rapid. operative intervention if the situation so requires. The modified regulators help in better guiding and informing individuals and collectives and in creating appropriate interest relationships. However, we can expect the solution of our problems, faster growth only from individual and collective initiatives, from standing one's ground, from independent leadership.

8584

CSO: 2500

RATE OF EXCHANGE POLICY EXAMINED

Budapest KULGAZDASAG in Hungarian No 9, Sep 79 pp 14-26

[Article by Ferenc Bartha: "Concerning a Few Interdependencies of Our Rate of Exchange Policy"]

[Text] One of the most debated questions in the course of preparing the 1980 economic regulators and producer price adjustment was how to develop the level of the commercial rates of exchange. The positions represented and the objective contradictions behind them are not of recent origin but rather and increasingly run like a thread through the period of the new economic guidance system. The essence of the theoretical debate can be formulated by asking whether low or high commercial rates of exchange serve more effectively the structural transformation and balance goals. An analysis of the practice of rate of exchange policy, however, shows that when selecting among the alternatives the realization of a consistency requirement is of greater significance because any option can be effective only by consistently carrying out a definite system of conditions.

The introduction of a uniform price multiplier was one of the central elements of the new economic guidance system introduced in Hungary in 1968. Prior to the introduction of the new economic guidance system there were diverse theoretical debates in which a notable place was occupied by the economic debate concerning the foreign exchange multipliers (the import multiplier interdependent with the price system).

The introduction of uniform foreign trade price multipliers was a significant step forward--despite all the deficiencies and difficulties which had been, in part, predicted by some or which, in part, arose in the course of operation--especially if we take into consideration the fact that rather unique views still reigned in connection with the role in socialism of rates of exchange for foreign currency.

"There was a widespread view among the economists of socialist countries that in socialism the rate of exchange for foreign currency was not only independent of the balance of payments but even of price levels in the individual countries."

Arguing with similar views they first tried to prove the commodity character of foreign currencies. "The planned distribution of foreign currency instruments does not exclude their commodity character...."² If foreign currencies have a commodity character then the effect of the law of value cannot be ignored and the price, the rate of exchange, is a value category. It was generally accepted that foreign exchange produced by or used in production and productive consumption, which is to say export and import, must be evaluated by uniform foreign exchange multipliers. The debate largely concentrated on three questions. On what base should the foreign exchange multipliers be defined? What magnitude should the foreign exchange multiplier have (the average limit debate)? And what is the link between the price system and the foreign exchange multiplier?

The Basis for Setting the Initial Foreign Exchange Multipliers

Purchasing power parity was rejected as a basis for establishing the foreign exchange multipliers out of both theoretical and practical considerations. Andras Brody succinctly summed up the theoretical considerations: "The principle of purchasing power parity is incorrect and disorienting in practice. Either it gives a correct result--in which case it is not needed because the price system is consistent too--or it is not consistent--in which case purchasing power parity is misleading and cannot be used to make the price system more consistent."³ The problem that purchasing power parity boils down into one ratio a conglomeration of many and difficult to compare commodities and prices is expressed as follows: "... how much one can buy for one forint depends on what we are spending it on."

More serious in the theoretical considerations was the fact that purchasing power parities calculated for production as a whole gave such low values--as a result of the interplay of many factors--that they simply could not be used in foreign trade calculations for a "realistic" evaluation of import. The fact was that "our foreign trade is giving value for capitalist foreign exchange which exceeds purchasing power parity."⁴

Sandor Balazsy formulated a theoretical basis for establishing foreign exchange multipliers: "The use value of foreign exchanges is given by the fact that they have purchasing power on a definite external market (or markets) and their value is determined--as in the case of all commodities--by how much social work must be used to reproduce (or acquire) them."⁵

The principle finally adopted and applied followed from this, a principle of the foreign exchange production cost of export, which can be understood as a special "purchasing power parity," in which the total net foreign exchange price of goods being exported (that is, decreased by the costs occurring in the foreign exchange) must be compared to the total forint price (the valid domestic price if any or the production cost of the export plus an average profit).

Naturally only a price multiplier defined at a level of average foreign exchange generation can be conceived of as such a special purchasing power parity; the so-called "limit multiplier" (which under certain conditions could function as a "balance" multiplier) could not be.

Even prior to 1968 there was a consideration of import replacement or import saving costs when establishing the price multipliers: "Mutually advantageous contacts are necessarily reflected in the fact that the foreign exchange generation keys of the countries are lower than the import multipliers."⁶ Later this principle was formulated more definitely: "A price multiplier defined on the basis of foreign currency savings costs is based on the rational principle that the domestic expenditure for import per unit of foreign currency should be the criterion of export economicalness."⁷ And in the same place: "... as a result the price multiplier calculated on the basis of foreign exchange savings costs will in general be greater than if the calculation had been done on the basis of foreign currency production costs." In effect such a multiplier would function as a limit multiplier so we will not turn to it separately here.

Average Multiplier--Limit Multiplier

Only apparently did the debate concern the magnitude to be introduced; what was essential was whether we would use foreign trade price multipliers of the price multiplier or the rate of exchange type. The basic criterion for a price multiplier of the rate of exchange type is that export-import financial bridges other than the normative elements--duties, tax rebates--are the exception (for example, for agriculture). There is a qualitative difference, going beyond magnitude, between an average multiplier and a limit multiplier. "Utilization of an average rate of exchange suits one definite conception of planning and economic guidance whereas a limit rate of exchange suits another conception (mechanism) of economic guidance and he who gives the advantage to one or the other is actually taking a stand for a definite method of economic guidance."⁸

A limit rate of exchange operates in a mechanism which is built consistently on a system of profit interest. "In an economic mechanism where the goal in foreign trade is to maximize profit the rate of exchange which orients the economy correctly always functions as a limit rate of exchange."⁹

Marton Tardos comes to a similar conclusion when he talks, in connection with an average multiplier, about the inevitable consequences of a financial bridge system: "There are really only two choices. One is to take the right of giving directives from the hands of central planning organs and give it to central financial organs, who would decide on the basis of their own ideas. The other change--more advantageous, more important and more favorable than the first--would be the automatic nullification of the planned transaction if the marketing possibilities or domestic production conditions became less favorable in practice than had been expected."¹⁰ The first prediction of Marton Tardos came true; the second did not because he did not reckon with the possibility that the financial bridges could follow worsening conditions "flexibly" too.

In addition to carrying with it the consequences of a certain mechanism the limit multiplier was the basic position of men of science. They showed on theoretical foundations and with scientific arguments that "an optimal program pair (i.e., an export and import program) involves a uniform limit rate of exchange...." "Every prescribed balance or total domestic expenditure involves a uniform limit rate of exchange."¹¹

They considered the chief function of a price multiplier to be the facilitation of "rational" or optimal structural decisions and a foreign trade balance. They did not consider the three chief arguments brought against a limit multiplier to be crucial. The limit multiplier is not unstable because the limit multiplier is not to be set at an excessively high generation value but rather at an upper compaction point. It does not have an inflationary effect because while its introduction has a one-time price increase effect this can be counterbalanced by moderating other net incomes included in the price. And extra enterprise incomes can be withdrawn by negative contributions.

Those who believed in an average multiplier were usually practical workers who considered an average multiplier to be correct primarily for pragmatic reasons, thus they opposed the limit multiplier. The efficiency differences in production would be too extreme and there would be a large differentiation. An evaluation of export and import by means of a limit multiplier would cause unbridgeable difficulties. Financial bridges could not be avoided. In the ruble relationship, where the development of structure is less an enterprise category, only an average multiplier can be considered. A more extensive and more flexible system of financial bridges permits greater scope to state influences. The transition could be made with fewer conflicts too, which would mean greater security in a period bringing innumerable changes in the new mechanism. The greater part of the problems and difficulties can, in substance, be attributed to the price system, or to the mutual effect of the price system and the rate of exchange.

The Interdependence of the Price Multiplier and the Price System

It can be seen in principle that an average multiplier belongs to an autarkic price system while a limit multiplier (a price multiplier of the rate of exchange type) belongs to a market (world market) price system. The reverse of this interdependence is also true, a definite price system belongs to a given type of price multiplier. A world market price system (a price system in which domestic prices are in the competitive sphere and are adjusted to export and import prices primarily in relationship to producers prices) cannot function with an average multiplier because it would initiate unbearable structural changes and cause shocks in the foundations of the external and internal balance. With an autarkic price system a limit multiplier which involved financial bridges (price mixing) on the import side corresponding to the principles of import price formation but had no profit withdrawals on the export side would render inoperable a mechanism based on profit interest and enterprise independence or would lead to massive

parallel export-import processes which were irrational and harmful to economic efficiency in that export activity would be a good bit more profitable, because of the system, than domestic marketing so that the enterprises would export everything, up to the limits of market restrictions, while the trade balance would worsen rather than improve (because of the reduction in comparative advantages) because the domestic demand, which was thus not satisfied, would have to be provided for from import.

It is a fact that the idea of introducing a price system based on world market prices came up even before 1968¹² but it was not well received.

"In a later phase of the debate Tibor Liska interpreted these ideas in a surprising manner, as if I had made the essence of the world market price conception my own whereas I had only 'consolidated' the original proposal. This is a perfect misinterpretation of the real state of affairs."¹³ At that time thinking and conditions were ripe only for something less.

"What we must debate is the way in which to take the world market price into consideration."¹⁴ There were also ideological reservations in regard to a price system based on world market prices. "Of course, if we did not presume a socialist planned economy but rather presumed some sort of completely 'free trade' socialism which realized the unbridled rule of a spontaneous market mechanism where every socialist enterprise (producing and foreign trade enterprises) strove to maximize its profit, producing, exporting and importing what it liked, the producing enterprises themselves deciding on the development of their production and prices developing freely then domestic price ratios might really adjust to the world market prices, would not differ much from them, and there would be no logical contradiction between the basic principle of world market prices and the supplementary principle of balance prices. But it can hardly be imagined that Tibor Liska would want to realize a 'socialism' of this type."

Finally, the question of shifting to a world market price system did not come on the agenda before 1968 for a number of realistic reasons. One of the chief reasons was that we were in contact with two markets with different orders of value and of these the importance of socialist cooperation was definitive, not only in regard to the given situation but over the long range also, in regard to both intentions (the priority development of our contacts with the socialist countries) and possibilities (the convertability of export goods between the two markets) so the necessity of a domestic price adjustment to capitalist world market prices could not be understood from the side of real relationships.

The other chief reason lay in the fact that in comparison to the earlier isolation from world market price and value relationships there was a great leap forward in regard to the link of external and internal prices--even without a world market price system. The system which developed provided adequate security for a gradual structural improvement and disclosure of reserves. In any case, the reigning view was that as a result of gradual, selective development there would be a readjustment of domestic efficiency and productivity ratios and thus of cost relationships so that there would

be a development of domestic producers prices--reflecting the readjustment of cost relationships--which would in practice approximate the world market price ratios, especially if the CEMA commodity and monetary relationships increasingly followed the world market relationships.

The Further Development of the Price Multiplier Into a Rate of Exchange

It is one of the strategic goals of the further development of our regulator system that the price multiplier should fulfil its functions ever more completely, in parallel with a strengthening of the normative character of the regulator system, even playing more or less a "vanguard" role in strengthening the normative character of the price multiplier, thus becoming a commercial rate of exchange in the sense given in the foregoing.

This goal was formulated even at the initiation of the new economic guidance system. We can read in the pertinent party resolutions the following essential statements in regard to the foreign exchange multipliers:

"The magnitude of the uniform foreign exchange multipliers should be set in such a way as to encourage economical export and thrifty management of imports, having an effect in the direction of restoring the balance."¹⁶

"A selective and gradually shrinking export support system which ensures the necessary volume of export will also contribute to an improvement of its composition."¹⁷ "But one can also reckon with the fact that with the unfolding of the new economic mechanism, encouraging an increase in economical export and bringing to the surface the reserves hiding in management, the generation of foreign exchange will become cheaper. Thus it will be possible to reduce the sphere of supports and import limitations can be moderated too."¹⁸

The principles developed for the foreign exchange multiplier included a price system in which there were "mixed" domestic prices for primary materials and (homogeneous) semi-finished goods, a price multiplier price for materials acquired in only one import relationship, a price multiplier price for other imported products and a price multiplier price plus state rebate for export products. In general the competitive price multiplier export-import prices did not apply to domestic marketing prices; in fact, for about half of export the price multiplier was adjusted to domestic prices, via the export support system. This meant, on the one hand, that the given relationship of external and internal prices actually came into being as a result of the export-import trade realized (the price multiplier had a central but not a definitive role in this relationship) while, on the other hand, the domestic price system remained fundamentally autarkic.

The price multiplier developed on the principle of average export generation costs and the price system characterized by the above were in harmony with one another and a further development in the direction of a rate of exchange, in the sense originally formulated, must be considered a

consistent goal. It was the supposition that the increasing efficiency of export and production which was expected, which would moderate the average generation costs, would make possible a reduction in the state rebate. Conversely, this means that an improvement in foreign exchange production must be followed not by a reduction in the price multiplier but rather by a reduction in the state rebate; this means that the average principle applies to the initial phase while the limit character of the price multiplier strengthens in the course of operation.

The primary, and in my opinion the most crucial, inconsistency of the rate of exchange policy followed for the past 10 years derives from the fact that we made the average principle, the constant simultaneous change of the price multiplier and the average generation index, into a constant, lasting principle while maintaining the requirement to develop the price multiplier into a rate of exchange, thus maintaining the degressive character of the state rebate, the otherwise correct requirement of thus encouraging an improvement in the economicalness of export and, as a result, the generation index.

This produces the possibility, indeed the necessity, of reducing the price multiplier, on the basis of the average principle. And this reduction of the price multiplier places higher demands for economicalness for all export so the above process runs its course not only in the sphere affected by state rebates but throughout the entire export spectrum, which again results in an improvement of the generation index and a reduction of the multiplier. In the meantime, a further moderation of the state rebate becomes timely and the process tends to moderate the price multiplier.

If we now examine the balance of trade then achieving or maintaining a balance, taking into consideration the above situation, poses the following stepped-up demands on the export capability of the economy:

There can be a balance if the export dynamics of the most economical export products and of those products capable of catching up to the rising efficiency level (where the rate of increase in domestic productivity exceeds the average international increase in productivity for the given product) is sufficiently high to counterbalance the export decreasing and import increasing effect of uneconomical products being eliminated from production, the traditional average import tied to the rate of economic growth and the supplementary import needs deriving from an increase in import demand. Even without giving examples it can be seen that there are powerful external market and internal production regrouping limitations to achieving the export dynamics for such a process.

There is a further tension affecting the balance of trade if we cease not only production for export of products which become uneconomical in export but also cease production for domestic use because this increases import demand and further increases the export demands being made of capacity which is capable of export. If the cessation of production affects only export then the comparative advantage deriving from foreign trade deteriorates.

The Price Multiplier Tends to Lag Behind the Average Export Foreign Exchange Generation Costs

It has been another important characteristic of price multiplier policy, and another inconsistency of the system, that in practice the price multipliers have not reached even the theoretically accepted average generation costs. In large part this can be attributed to the same causes as led to acceptance of the average principle in the average-limit debate. But in effect this has led to a further sharpening of the contradictions accompanying the average multiplier. Similarly, the paradox nature of the first inconsistency has increased in that in practice the development of the price multiplier into a rate of exchange appeared in relationship to an initial price multiplier which was below average.

The fact that the foreign trade price multiplier tends to over-value forint exchange can be seen in the fact that the price multiplier is lower as measured by each of the possible comparison bases. Starting from the balance rate of exchange theory forint exchange is over-valued on the basis of two considerations. On the one hand both the balance of trade and the balance of payments are constantly and increasingly deficit and, on the other hand, this is true despite the fact that the state rebate is of significant magnitude.

Theory predicts that a price multiplier which orients well for an optimal international division of labor will be some sort of limit multiplier; so from this viewpoint also the average multiplier must be conceived of as an over-valued rate of exchange.

Finally, the commercial rate of exchange is over-valued as compared to an average generation index, as a base, which corresponds to purchasing power parity and the guiding principles because the price multiplier is constantly lower than average foreign exchange generation. According to purchasing power parity theory the average is only a center of attraction and the rate of exchange deviates from it depending on the position of the trade or accounting balance which, looking at our concrete situation, would presume setting the price multiplier above the average. The same thing can be said about the price multiplier in connection with an active rate of exchange policy, that the price multiplier can deviate to a certain degree from the average, as a base, as a function of the chief economic policy goals.

It is useful to review briefly a few of the causes which played a role in ultimately setting the price multiplier below the average export foreign exchange costs.

The "Initial" Price Multiplier Was Already Below the Average

One of the original causes was that the "initial" price multiplier was below the average generation. The category of "initial" price multiplier should be referred not only to 1968 but rather to all those points in time under

later conditions when there were more significant authoritative price adjustments, when the price system changed. In these price adjustments a consistent realization of the average principle runs into difficulties for two reasons. One is the traditionally low nature of the evaluation of import; the other is the relatively restricted consumer price limit, the fact that producer price adjustments can be accompanied by only very limited and mild consumer price changes. This problem goes back for decades. Andras Brody wrote about it in 1964 in this way:

"We cannot raise the import multiplier up to or above the level of the foreign exchange generation key because this would make imported materials and products expensive. So exported products become expensive and this increases the foreign exchange generation key. Either we resign ourselves to the fact that this key will be higher than the import multiplier or we produce by our efforts endless price increases and these finally clash with the consumer prices and thus our producer price system will no longer 'fit into' the consumer price system."¹⁹

So in 1968, and since then too, we have been faced with the problem that the evaluation of import, including the evaluation of energy and materials, has been relatively low from the beginning as compared to the average export generation cost. This has been added to by the shift in price ratios to the benefit of energy and materials as a result of the world market price explosion, by the deterioration in the terms of trade which resulted and by the present necessity to introduce a price system based on the world market beginning in 1980. So there is a race in which an import multiplier which is "bearable" from the side of price adjustments cannot catch up with the average export generation costs and so in practice most of the import multipliers used in price adjustments are introduced as price multipliers.

In principle there is not an infinite escalation between the import multipliers and the average (or even limit) export generation indexes. Foreign exchange generation should be calculated not to a gross value but rather to a net value and this value should be used as an import multiplier. In this case the gross foreign exchange generation index coincides with the net value and so the multiplier to be used in a price adjustment can be introduced in practice because it really will correspond to the average generation costs. The question as to what net value to take as a base is a function of the price adjustment. Insofar as only the actual import is evaluated at the level of the price multiplier the generation of foreign exchange must be purged of the accumulated import material content in that the forint price total of the import material must be subtracted from the numerator and the foreign exchange price total must be subtracted from the denominator. With conversion to a price system based on the world market price the generation index must be purged of all accumulated material costs so that in practice one must calculate the added value.

Thus the gross and the net foreign exchange generation indexes can deviate from one another so that the net index is higher if material imports or materials in general are relatively under-valued in the given price system.

As a result a price multiplier which functions lower than the export average generation index means that material import is relatively cheap. This fact has detrimental effects on the production, consumption and export structure and on the trade balance.

Actually the contradiction between a price multiplier which ensures the same level for the gross and the net export generation indexes on the one hand and the prevailing consumer price restrictions on the other can be resolved. One way is that which will be used in the 1980 price adjustments, when we will reduce the net income content contained in the producers prices and this will counterbalance the increase in the price level due to the necessary increases in material prices. Of course this may not always be satisfactory, not even in 1980, because there is also the goal of progress in the direction of a two level price system and this actually means that the consumer price restrictions will narrow in accordance with the magnitude of the step taken in the direction of a two level system.

If the gross and net indexes cannot be brought to the same level by decreasing the net income in the producers prices, because this would mean an excessive increase in the price level, then it is possible to redistribute the producers prices by a certain value in the interest of achieving the desired producers price level. But a consistent realization of this would require a price, wage and monetary reform.

So the problem of the initial price multiplier derives from the fact that an evaluation of import at the level of the foreign exchange generation index for the base period is injurious to the foreign exchange generation index for the reporting period. Turning this around it used to be said, for example in regard to 1968, that the level of domestic prices actually introduced became higher than the calculated price level. This was a problem already in 1959. "This happened in developing the 1959 price adjustment. The import multipliers selected as a starting point immediately became obsolete after execution of the price adjustment. Prior to the 1959 price adjustment the key of 30-40 forints to the dollar was realistic. After execution of the price adjustment, however, it proved oppressively low. (It was moving around 20 and 70 forints to the dollar.)"²⁰

A similar thing happened in the case of the price multipliers introduced in 1968. The foreign exchange generation indexes which established price multipliers of 60 forints to the dollar and 40 forints to the ruble were the actual values for the period preceding the price adjustment. In articles published in 1964 we find the following: "Let us presume, for example, that the average production cost of a clearing ruble--calculated at prices developing within the framework of an adjustment of industrial producers prices--is 40 forints and that of a convertible dollar is 60 forints."²¹

"The foreign exchange generation key, that is the forint/foreign exchange forint ratio, in regard to less economically developed countries and developed capitalist countries respectively is 5.01 and 4.80, that is we export domestic

products to this forint value in order to acquire one foreign exchange forint."²² Since the dollar to foreign exchange forint ratio was one dollar equals 11.74 foreign exchange forints the 5.01 forint to foreign exchange forint ratio corresponded to an index of 59 forints to the dollar. But later, when the price adjustment was concluded, calculating with a price multiplier of 60 forints to the dollar, they calculated the relationship of external and internal prices and found that the domestic price level was higher than it had been thought before and there was no longer any way--not even technically--to change the price multipliers.

There was a similar problem in 1976 even when, prior to this, foreign exchange generation had improved (largely as a result of the fact that the increase in import prices was not passed on to domestic prices but rather neutralized with budgetary supports) and they decided on an 8 percent reduction in the price multiplier (a markup) while simultaneously increasing the domestic prices for materials and energy. The final result was that the generation index and the price multiplier, which had been approaching one another before, again deviated in 1976 in the direction of an over-valuation of the forint.

Typically, the problem of the "initial" price multiplier is coming up in the 1980 price adjustment too. The stubborn return of the problem of the "initial" price multiplier calls attention to the fact that achieving an average multiplier and especially developing the price multiplier into a rate of exchange, creating at the same time a price system which provides a good orientation and is capable of working flexibly, cannot be done with one "big step" but rather must be done with "little steps" through organic development.

A decision regarding the magnitude of an "initial" price multiplier, one to be introduced with each adjustment of the mechanism, is closely interdependent with the problem of the continual development of the price multiplier. We separate the two now in the interest of a more systematic discussion but the factors and motivations effective with one can also be found with the other.

Decisions Aimed At Maintaining Correct Rate of Exchange Ratios Also Affect the Level of the Price Multiplier

Price multiplier policy was relatively simple until an active rate of exchange policy was proposed, until the international development of what is in practice a floating rate of exchange system. There were changes in the price multiplier only if the states devalued or marked up certain foreign currencies in comparison to official parity, usually gold parity. Up to the spring of 1973, when the floating of rates of exchange became general, the rate of exchange for individual foreign currencies (the foreign exchange forint) was changed on such a basis on 10 occasions; and thus the foreign trade price multiplier was changed too. The price multipliers were changed on 11 occasions between the spring of 1973 and the end of 1975, under the conditions of floating.

Beginning in January 1976 the declared active rate of exchange policy was accompanied by formal changes also. The foreign exchange forint was abolished as a base rate of exchange based on the gold content of the forint and the substituted rate of exchange, as a non-commercial rate of exchange, emerged as what was actually an official rate of exchange. The price multiplier, according to the new terminology the commercial rate of exchange, was based on this, with an unchanged 100 percent price factor. The rates of exchange were changed on 21 occasions between 1976 and 1978.

Fundamentally the changes in the rate of exchange were always aimed at having the price multipliers and the forint rates of exchange for the several convertible foreign exchanges correctly reflect the real value ratios of these foreign exchanges as they had developed on the money market. Decisions aimed at correcting the price multiplier ratios always contain indirectly positions taken in regard to the level of the price multiplier and they do this in two respects. In the first place if a few countries devalue their foreign exchange or if their foreign exchanges float downward in exchange value then there is a relative improvement of their trade position in regard to the partner countries. And this can have an effect on the rates of exchange of the partner countries, as a function of the extent to which they can bear the consequences of the markup of their foreign exchange. In the case of non-convertible exchanges this process does not take place through the market automatism but rather as a result of official decisions when it must be decided whether it is best to carry out a full or only partial devaluation of certain exchanges. If this is done partially it means that the rate of exchange ratios are restored together with a certain devaluation of the forint.

The floating of rates of exchange means a regular variation in rates of exchange. The group of exchanges in a strong position is marked up largely to individually differentiated degrees as compared to the group of weakening exchanges, they lose from the magnitude of the markup and then strengthen, and certain long range tendencies run through these variations. If we realize these variations in our rate of exchange system in the interest of maintaining correct rate of exchange ratios in such a way as to carry out corrections with a consistent reduction in the rate of exchange this leads to a markup of the forint. But this markup cannot be interpreted in relation to the generation index; it appears rather in relation to a new comparison base, the value of the foreign exchange basket measured in the structure of so-called export foreign exchange income. Up to the end of 1975 the commercial forint was marked up by 13 percent as measured in the foreign exchange structure of Hungarian export conducted for capitalist foreign exchanges; it was marked up by 1.6 percent in 1976, by 0.8 percent in 1977 and by another 3.5 percent in 1978. This meant a forint markup totalling 20 percent as a result of the prevailing corrections of the rate of exchange ratios. Contributing to this was the 8 percent forint markup carried out on 1 January 1976 as a decision pertaining to the level of the rate of exchange.

This markup totalling 30 percent--in relation to the foreign exchange basket--in itself says nothing about how the foreign trade price multiplier has changed in comparison to the generation of foreign exchange, whether the undervaluation increased or decreased. It only indicates that in the course of developing foreign exchange ratios, without regard to the development of the generation index, there was a series of decisions which affected the level of the rate of exchange together with the rate of exchange ratios. We did not succeed in realizing the principle, recommended by many, that decisions pertaining to the level of the rate of exchange should be separated from decisions aimed at correcting rate of exchange ratios so that the latter should always result in unchanged forint values in regard to the given foreign exchange basket.

The Influential Role of the Decision Mechanism Pertaining to the Rate of Exchange

The government organs primarily interested in rate of exchange decisions are the PM [Ministry of Finance], the MNB [Hungarian National Bank], the OT [National Planning Office] and the OAAH [National Material and Price Office] and these organs are supplemented by the KKM [Ministry of Foreign Trade] in regard to the commercial rate of exchange. Within certain limits these organs make decisions jointly about rate of exchange ratios within their own sphere of authority. An adjustment of a rate of exchange ratio which goes beyond the given limits and any change in the level of the rate of exchange is in the sphere of authority of the government. The government decisions are fundamentally influenced by the preparatory and prior agreement activity of the appropriate organs and by the interests represented by or passed on by the several organs.

We start from the position that: "The organizational, authority and interest filled environment of decisions made within the framework of central public administration and their effect on decisions cannot be understood on the basis of legal-normative viewpoints alone."²³ "This organizational system is permeated with interest relationships so they themselves are not suspended above interest relationships but rather are themselves the carriers of heterogeneous interest aspirations."²⁴

The existence and multiplicity of partial interests tied to a given level of the commercial rate of exchange derive from the composite and synthesized nature of the rate of exchange and are interdependent with the functional approximation character of the rate of exchange. Hungarian professional literature has endowed the rate of exchange with a number of functions in various formulations. From the viewpoint of decision making it is sufficient to distinguish three basic functions--linking external-internal prices, the income distribution function, and functions influencing the balance of trade.

The situation obtains in general, but especially amidst the given Hungarian relationships, that different rate of exchange levels more effectively facilitate the realization of economic policy goals in different functional

interdependencies (relative domestic price stability, holding income flow within given frameworks or improving the external balance). Price stability and holding income flow within limits require a low rate of exchange while the external balance requires a relatively high rate of exchange.

It follows from this that a lower rate of exchange is in the interest of the QAAH because only in this way can it jointly maintain the link of external-internal prices and a given price level or a planned increase in the price level. Not only is it important to keep the rate of exchange low in the initial situation, it is also necessary to constantly mark up the forint so that increases in import prices can be realized so as not to increase, or to increase only partly, the domestic price level. In this case the larger part of the permitted (planned) price increase remains to syphon off the inflationary pressure of domestic origin.

The PM, and actually the OT also, is primarily interested in achieving the given export level with the smallest possible outflow of income. This can be ensured if the rate of exchange is low so that the zone of so-called profitable export is narrow and the rate of profit is not too high for enterprises generating this within the rate of exchange; for the rest of export the incomes can be portioned out according to the prevailing necessity and possibility through the state rebate system. Strict control of enterprise profits is necessary because resources must be ensured for inflexible budgetary expenditures and centrally financed plan tasks so that inflationary pressure does not strengthen in the economy. From the viewpoint of the budget the passing on of prices and a rate of exchange policy which facilitates this are significant also because in the absence of this import price supports must come from central resources.

The MNB, like banks of issue in general, is interested in a strong national currency and in exchange stability.

The KKM, which has special if not sole responsibility for the development of the foreign trade balance, is interested in having a relatively high commercial rate of exchange to produce more favorable export interest and to hold back import demand.

Naturally, in addition to their chief interests, the financial organs and the OT have what we might call a partial interest in the development of the external balance for they are responsible for it too. Thus, despite the given rate of exchange policy which is defined by their chief interests or primary responsibility, they certainly want to ensure the planned export and import prescriptions. The chief tool for this in the case of export is the state rebate, which must be strictly controlled to be consistent with the given rate of exchange policy. In the case of import the balance of trade viewpoint presupposes a strict authorization policy for there is a strong import interest due to relatively cheap imports.

But the realization of a strict export support and import authorization policy runs into many difficulties. One of these essential factors influencing decision making is the following: "From the viewpoint of power the large enterprises in a monopoly or oligopoly situation are like peaks which rise above the governmental level. The large enterprises which have developed in some branches often have the ability to influence decisions or realize interests in such a way as to force government organs into the background."²⁵

Thus a commercial rate of exchange kept below the average generation level inevitably increases the necessity of ad hoc intervention in both export and import, in the course of which the production, consumption and financial demands determined by the enterprises are more or less honored via a complex decision making process. This has a detrimental influence on the structure of export and import and on the functioning of the regulator system in that the possibility of realizing strong enterprise interests which comes to the surface in individual decisions overthrows a strict rate of exchange policy being conducted on a normative basis.

FOOTNOTES

1. Karoly Kover, "Several Theoretical Problems of the Rate of Exchange in Socialism," KOZGAZDASAGI SZEMLE, No 7-8, 1964, p 919.
2. Ibid, p 923.
3. Andras Brody, "Concerning the Import Multiplier and its Application," KOZGAZDASAGI SZEMLE, No 7-8, 1964, p 819.
4. Gyula Ujhegyi, "Foreign Trade Prices and Industrial Producer Price Formation," KOZGAZDASAGI SZEMLE, No 2, 1964.
5. Sandor Balazsy, "Producers Prices, Foreign Exchange Prices, Price Equalization," KOZGAZDASAGI SZEMLE, No 9, 1964.
6. Andras Brody, "Setting Domestic Prices for Imported Products," KOZGAZDASAGI SZEMLE, No 4, 1964, p 439.
7. Tamas Banfi, "A General Approximation of Rates of Exchange With Limited Validity," PENZUGYI SZEMLE, No 7, 1977, p 486.
8. Jeno Redei, "The Foreign Exchange Multiplier and the Foreign Trade Mechanism," KOZGAZDASAGI SZEMLE, No 11, 1965, p 308.
9. Ibid, p 313.
10. Marton Tardos, "How Profit Interest Might Work in Foreign Trade," KOZGAZDASAGI SZEMLE, No 12, 1965.

11. Andras Nagy, "The Optimal Volume of Foreign Trade and the Criterion of Economicalness," KOZGAZDASAGI SZEMLE, No 1-2, 1965.
12. Tibor Liska, "Critique and Conception," KOZGAZDASAGI SZEMLE, 1963.
13. Bela Csikos Nagy, "Critical Notes on a Price System Based on the World Market Price," KOZDASAGI SZEMLE, No 9, 1963.
14. Ibid.
15. Tamas Nagy, "Concerning a Critique and a Conception," KOZGAZDASAGI SZEMLE, No 9, 1963, p 1091.
- . Guiding Principles of the Central Committee of the MSZMP Concerning the Reform of the Economic Mechanism, 1966, V. 25-27, Resolutions and Documents of the MSZMP, 1963-1966, Kossuth Press, 1968, p 317.
17. Ibid, p 318.
18. Ibid, p 382.
19. Andras Brody, "Setting Domestic Prices for Imported Products," KOZGAZDASAGI SZEMLE, No 4, 1964.
20. Ibid.
21. Gyula Ujhelyi, "Foreign Trade Prices and Industrial Producer Price Formation," KOZGASDASAGI SZEMLE, No 2, 1964.
22. Andras Brody, "Setting Domestic Prices....," KOZGASDASAGI SZEMLE, No 4, 1964, p 439.
23. Mihaly Bihari, "The Organizational, Authority and Interest Environment of the Decision Making Mechanism," TARSADALMI SZEMLE, No 3, 1979, p 107.
24. Ibid, p 108.
25. Ibid, p 108.

8984

CSO: 2500

RACZ DISCUSSES WAGE DISTRIBUTION, EFFECTS ON INCENTIVES

Budapest TARSADALMI SZEMLE in Hungarian No 9, Sep 79 pp 9-21

[Article by Dr Albert Racz, state secretary, Ministry of Labor: "Wage Distribution According to Work, Incentive"]

[Text] In the drafting of wage policy goals and the shaping of wage computation practice alike, we wish to realize the principle of distribution according to work. In such distribution, the members of society encounter one another primarily as producers, as performers of work. They weigh whether they are sharing in work income in proportion to the quantity of work performed, quality and social usefulness. All of us make this comparison in respect to our work colleagues, managers, subordinates, other jobs and other enterprises.

There are some who consider it right to make these comparisons with other countries as well. We must know, however, that in taking possibilities into account any country can distribute among the members of its society only as much as it has produced. In this regard, various differences exist among individual countries which derive basically from the general development level of their economies, the status of work organization, and differences in productivity. It has been characteristic of our country for a number of years that by exceeding our possibilities, distribution for domestic consumption goals has exceeded what we produce. With the unfavorable, for Hungary, change which occurred on the world market, this situation has been developing since 1973.

In following the path of our economic policy we chose not to reduce or limit the entire domestic consumption but to meet the growing consumption and savings requirements by making use of foreign sources. Naturally, this path cannot be followed over the long run. And this defines the most important task in our economy: the gradual restoration of the economic equilibrium in such a way that it will be in the status of work organization, the level of productivity, and generally the development level of the economy that we will arrive at a state where we can cover our consumption from our own production.

It is in the interest of this general, but in practice very concrete, goal that we must develop our wage-policy principles and operate the various

elements of the wage system. We cannot link the latter to the equilibrium requirements, but the goal is that the whole of the wage system should raise requirements, operate instruments and call forth attitudes which in their totality--together with other instruments of economic guidance--will influence an improvement in the equilibrium. We can achieve all this by the consistent application of the socialist principle of distribution according to work.

Successes and Weaknesses of Our Wage System

In the practical realization during the past decades of distribution according to work, considering distribution socially, we have undeniably achieved successes although the process has not been free of contradictions. We can regard it as an important result that our wage computation system--in its own area of action--was a suitable instrument for regulating the outflow of purchasing power, which is an important precondition for plan management. This is assured primarily by the satisfactory operation in this respect of the wage and earnings regulatory system.

In the past decade, there has been a relatively balanced increase in earnings in the various economic branches, and as a consequence essential rate-of-increase differences in real wages for workers have not developed in the various branches.

In the first half of the 1970's, the differentiation by enterprises in the earnings increase depended on economic performance. In response thereto, the effect of material incentive increased until the end of the Fourth Five-Year Plan. This played a role in the improving of economic results.

We made progress in realizing the principle of equal wages for equal work although we can by no means maintain that we can realize it consistently. Consider, among other things, the unjustifiable differences that still occur in many places in the earnings of women and men.

Those who work under difficult or unfavorable work conditions are granted increased material recognition partly through central wage policy measures and partly through the differentiated use of wage instruments used by enterprises.

We have succeeded through central wage policy measures in closing the gap in the wage level of health and education workers who are lagging behind in wage increases as compared with workers in the enterprise sphere.

In combined response to the economic regulatory system, wage and earnings regulation and central wage policy measures, a proper line of differentiation has been created in the ratios of the earning level to the benefit of the giant enterprises.

The foregoing supports the fact that distribution according to work is present in our society as an economic political goal and result.

An intention to improve, a more consistent realization of the socialist principles of distribution according to work, and a more effective operation than heretofore require of us the carrying out of measures to enhance critical examination and effectiveness. We can by no means at all maintain that our wage computation practice meets the requirements it faces. The realization of many factors independent of the work performed causes a distortion of distribution according to work. Performance differences are not sufficiently reflected in wage ratios. The differentiation in earnings is more moderate than would be justified by variations in work performance, and therefore their incentive effect is small. The wage ratios do not adequately promote the mobility and relocation of manpower in harmony with the national economic interest. In the present phase of the building of socialism and in the realization of the principle of distribution according to work, we must bear in mind that the qualitative aspect is becoming more and more the characteristic of "work performed" which we stress. This means, on one hand, an increase in jobs that require a higher culture and skill and generally an increase in the ratio of intellectual activity; on the other hand, it means that the quality requirements are being increased regarding every job.

In recent times, the wage system has served in a more and more limited way the realization of economic political goals that adjust to changing circumstance. Correct and timely measures for the modification of methods have been undertaken too late at times. Adjustment to the new requirements has been late. The results attained have proved too little, and in their area also we need to take further steps.

The substance of the wage policy--that is, the kinds of goals that it sets, the kinds of instruments and methods it uses--is determined by social and economic factors. How, in some phase of development, it meets the requirements that it faces is determined in large part by economic conditions, that is, the rate of increase in national income, the possibilities for an increase in domestic consumption, the ratio of consumption and savings, the development of employment, and the possibilities for increase in real wages. Our situation which has become more difficult requires greater consistency in practical wage policy.

Wage computation and the wage system must fulfill two functions: together with the fulfillment of distribution tasks, it needs to provide incentive for the fulfillment of social and economic tasks. Every distribution feature is also at the same time some kind of incentive feature. We must develop a mode of distribution that will drive the incentive effect in the proper direction and give it appropriate intensity. This can only be attained if a requirement is linked to every forint distributed as work income, and the requirements are of a relatively balanced "stress."

In recent years, a balanced development in wages has been assured and this has inevitably forced into the background the principle of performance, a differentiated distribution, and in final analysis the realization of the

incentive function. The effort at balancing has become general. Certain elements of the wage system (earnings regulation, preferences, National Occupational Wage Table) as well as elements outside the sphere of wage computation (financial support system) have exerted an influence in the direction of equality. In some cases, the positions taken by the social organs have also contributed to moderating the differentiation.

Earnings Ratios, Differentiation

The basic condition of incentive effectiveness, of distribution as adjusted to performance, is that appropriate earnings ratios should be developed among occupations and jobs requiring varying training and responsibility and accompanied by varying physical uses and work circumstances. The concept of "appropriate earnings ratios" indicates a work area, an occupation composition and construction in which the easiest, most simple, and most comfortable, and, therefore, the lowest paid jobs, are to be found as well as the most complicated, responsible, and least comfortable, and, therefore, the highest paid. Between the extreme points of the hierarchy, pay for individual jobs depends on the extent of training, work circumstances, responsibility, and so forth. The differentiation of wages is determined by two factors: the place occupied in the job entry listing and actual performance.

In the area of establishing occupation and job earnings, the basic endeavor of wage policy was that for jobs with the same requirements there should be the same pay for same performance, or in the case of jobs with different requirements the attainable earnings should be different. This is the basis for individual incentive and for the realization of a differentiated wage computation based on performance among individuals.

In the past several years, the spread in earnings for the same occupations and jobs has been about 30-35 percent, in ratio of the occupation and average job earnings. This spread has proved to be too little as an incentive for performance increase. In the case of well-developed performance requirements with identical stress and given the use of well-chosen forms, a great individual spread in earnings would be justified on the basis of performance differences. The spread in occupation and job earnings, in adjusting to performances, is of great importance as the appropriate incentive to individual performance from the viewpoint of effective employment within the enterprise.

The establishment of occupation and job earnings ratios is in the final analysis an enterprise task. But the possibility for the consistent realization of the principle of distribution according to work must be created at the economic guidance and regulation level for the enterprises. In recent years, there have been several measures which stimulated the enterprises to level out occupation and job earnings. Such, for example, was the application (1975) of OZB [National Occupational Wage Table], the goal of which was to limit the spread in basic wages for workers in the same occupation at different economic units. At the beginning of the 1970's we became aware, in fact, that there were significant differences in the earnings of workers at

different enterprises and cooperatives even though these were not justified either by the results of the economic units or the individual performances. In this area, there was also use for the OSZB; at the same time, however, it limited a more vigorous differentiation in occupational and job wages. The OSZB does not make it possible for a perceptible difference to emerge on behalf of workers engaged in different performances in respect to wages and earnings. It is advisable, therefore, to put an end to this and assure the possibilities for the necessary differentiation on the basis of a modernized rate system.

An influence toward equality was also felt in the central order which prescribes that by a definite point of time the low wage range of the compulsory rate schedule must be attained. We can still regard this as a proper goal but only with the stipulation that at the same time the entries must be reviewed in the course of which we desire strongly and consistently to realize those socially useful and important requirements that everyone must be ranked in a category according to his occupation, training, etc. Our enterprises and institutions have only rarely carried out this important task. Manpower concerns, social pressure and a more comfortable attitude stimulate merely the attainment of the low range. At the same time this means that in most cases higher earnings are made possible without the performance requirement and on the basis of an "order from above."

The proliferating and extensive bonus system also moderates the possibility and realization of differentiation according to performance. It is, of course, necessary that we acknowledge in the form of a bonus such circumstances of work performance as cannot be built, or it is not advisable to do so, into the basic wage. However, if the bonus becomes a form of money for general attendance, or it is used for formal reasons only as a means of an earnings increase or for assuring a higher earning to keep manpower, then it has harmful effects from the viewpoint of incentive because it distorts the earnings ratios among individuals, workplaces, and enterprises.

The wage policy has endeavored to realize an important differentiation in favor of higher qualifications, greater physical employment, and unfavorable working circumstances, and to promote therewith meeting the manpower needs of such areas. To this end, central wage measures were taken.

The stresses in manpower availability, however, can no longer be attributed only to, or primarily to, wage computation problems. Under the limits of its own possibilities, wage policy has endeavored to establish appropriate wage ratios for occupations with manpower shortages. This is shown by the data. In 1977, for example, a number of occupations, where they were trying to cope with manpower recruitment difficulties in the state and construction industries, average wages were established as follows:

Occupation

Yearly average for manual workers
in state industry=100%

Coal miner	
Assistant coal miner	227.6
Founder	148.4
Steel worker	146.2
Spinner	115.1
Manual workers in state industry	100.0

The average wage of skilled workers employed under difficult and unfavorable circumstances is perceptibly higher than the average wage of construction industry workers. Moreover, those who accept work in these occupations receive from the enterprises a whole series of special allowances with which it is sought to make employment in the field more attractive. (Consider, for example, the so-called traffic allowance of the bus drivers in Budapest transportation) Despite all this, we have not succeeded in eliminating the shortages.

In some areas where occupations involve difficult, unfavorable work circumstances and dangerous work activity, it is not possible to solve the problem of an adequate manpower supply merely by wage increases. In these areas we must, above all, improve the work circumstances and conditions and reduce the personnel requirement by raising the level of techniques, technology and organization. Through conscious action, we continue to need to raise in social opinion the position and the prestige of occupations that involve difficult, unfavorable work. Political work, education in and outside the home, mass communications, and the guidance of intellectual life have an important role.

The foregoing indicates that at the economic-guidance level and in the establishing of the principles and instruments of the wage system, we must be consistent and forward looking.

The economic units also have important tasks. For the individual, the link between performance and wage appears at the workplace. The enterprise directly determines the performance requirement and also pays the wage in recognition of the work performed. Enterprise managers must do more in the future to realize incentive wage computation proportional to performance. In recent years, because of attitudes, they did not use even those possibilities available to them for the secure hiring or keeping of manpower. Considerably widespread is a harmful outlook that manpower can be hired and kept only with money.

The most important and serious critical observation, however, is that the performance requirement is not adequate. This refers not only to manual but also to administrative and intellectual work. We must go beyond the outlook that it is possible to expect and demand performance and to pay in ratio to

performance only in the field of manual work. As a matter of fact, many maintain, in such a case also, it is possible only among the so-called performance wage workers. It is true that in the work areas that can be set to norms, where the performance requirement can be prescribed with some kind of quantitative index, it is more obvious and if you please, the work performed is visible even to the naked eye. But all jobs in all organizations must represent the carrying out of a well-defined, quantitatively and/or qualitatively determined task.

Hence the requirement is set when we define for all the jobs, for managers and subordinates alike, the task to be carried out and the accompanying wage. This is not only a wage computation but also a manpower management task. It helps the enterprise employ only as many persons as are necessary for carrying out its tasks. Perhaps it will not be an exaggeration to say that this represents one of the greatest reserves for the improvement of management efficiency. Moreover, it is in this way that one can truly learn what is the task of every worker at the enterprise. Many of our enterprises still have to do job descriptions harmonized with the enterprise tasks and on this basis they still have to fix the requirements that extend to all jobs.

We must move forward with a more effective use of performance wage computation. First of all, we must revise the norms which have become lax at many places and for a considerably long time. Although the expression "norm revision" has a bad ring to it because of memories from the early 1950's, we must continue to use it because according to experience we have somewhat neglected "continuous norm maintenance." Neither economic guidance nor the whole system of regulation--including wage regulation--forced or compelled the enterprises toward increasing the performance requirements.

Questions Related to Differentiation

Many questions arise in relation to differentiated wage computation which we must clarify constantly as we develop our wage-policy goals. Let us examine several of these.

1. We generally link the concept of "performance" to the individual in the everyday sense of requirement. Today no one disputes that in taking training, responsibility and work circumstances into account, the wage by entry of the employees in a given organization varies (at most they dispute the extent of the variations and regard them as too little or too much). However, the incentive is limited and the necessity for the differentiation is rightfully made questionable if the earnings of those on varying points of the scale and the performance expected in the given assignment are not in harmony. It also vitiates the incentive effect of wage computation if an actual performance difference is not expressed differentially in earnings among workers in the same job.

In the shaping of individual earnings, a significant role is played by the basic wages and wage schedules by which they are regulated. Worker and

employee schedules in force assure an appropriate framework for the differentiation in basic wages, on the basis of the training necessary for the work, physical difficulty, work circumstances, performance, and actual time spent on the job. It is not necessary to change them basically. But if the wage level is rising relatively rapidly, then many will attain the higher earnings and a bulge will appear at the high ranges of the wage entries, and after a while there will be no way materially to recognize the best workers by way of raising the basic wage. Therefore, the wage entries must be raised from time to time to make further differentiation possible. We must thus manage to modify schedules and entries in harmony with our material sources.

It is also advisable to determine performance requirements for small or large working groups and measure performance accordingly. In such cases we can use various kinds of group wage computation. One characteristic type of group wage computation is built on one-sum payment, and also there is brigade wage computation. Their use provides incentive for the members of small and large collectives to help one another in their work, coordinate common tasks better, that is, make them more productive and effective. In certain kinds of work it is not even possible to separate the performance of the individuals. It is advisable to introduce these forms in broader scope because with their application the consciousness-forming effect cannot be ignored any more than their economic effect.

2. Incentive for effective management requires not only that the individual or the groups within the enterprise be made interested in better job performance but also the combined collectives of the enterprises. This can be realized only if the individual earnings, the earning possibilities are also differentiated according to how efficiently and, in the final analysis, how effectively the members of the enterprise collective work. That is, the enterprises that work more efficiently will be able to provide higher wages for their workers, who will feel more closely bound to these enterprises, the feeling of belonging to the enterprise collective will be strengthened, and the prestige of the workplace will be increased.

An important instrument for differentiation depending on performance in enterprise earnings is wage and earning regulation. The norms and conditions thereof must be so shaped that enterprises operating with varying degrees of efficiency or enterprises increasing their economically useful performance to varying degrees should also be allowed to vary in their wage development and earnings growth possibilities.

In wage and earnings regulation, we desire to realize the following main principles. In all areas of the economy where the profit incentive can be realized, it is advisable to tie the possibilities for increasing enterprise wages to the performance requirement. On the other hand, where the branch characteristics are justified, it is advisable to use central wage regulation. In both cases the regulation will generally be directed at the wage bill.

There is widely held view that in the wage bill control system limitations on the wage level hinder the reduction of superfluous personnel, and, therefore, they have formulated the requirement that we apply the wage bill control system "in a pure way." It is true that in recent years there have been negative control features in that when an enterprise by increasing efficiency achieved the limit (6 percent) up to which it could carry out wage development, it was no longer interested in personnel reduction. Such a limit must be eliminated. In the future, every enterprise operating in the framework of the wage bill control system will have the possibility through efficiency improvement to raise the wage level tax-free to a determined extent beyond the wage development that was achieved by using the wages stemming from personnel savings.

Hence this solution will make all of the enterprises interested in personnel savings. There can be a debate over what the expression "to a determined extent" means. In my opinion it would be advisable to prescribe this "determined extent" at a 2-3 percent tax-free increase beyond the wage development set for the improvement of efficiency. With this we could assure that the economic organizations would have an incentive for increasing efficiency because it would be by this means that they could make way for significant wage development. If the wage development possibility were set higher, we would, even against our wish, put into an advantageous position those enterprises which are at present poorly organized and working with excessively inflated manpower. Finally, the rational use of manpower cannot be regarded as a campaign matter; it is a process, and, regarded as such, within 3-4 years the possibility will exist for a 10-percent supplementary wage development by virtue of conscious, planned personnel management. This is not a small thing.

A basic goal is that every branch (occupational branch) of the economy should operate in one of the wage regulation forms being worked out. One-time wage regulation differing from the general and used for the enterprise should not occur. With this, the norms of regulation should be strengthened.

It is necessary to strengthen the long-term outlook in management. We can attain this first of all with a purposefully worked out system of wage reserves and perhaps wage development payment advances.

To increase incentive, it is necessary to operate the wage preference system on the basis of new principles. First of all, it is necessary to support those enterprise programs which serve important economic interests, to be sure, even though the wage increase possibilities have, for the time being, an expressly unfavorable effect. It is advisable, for example, to support an otherwise efficiently operating enterprise when, in the period of transforming the product structure, its results are weak until the new product is being run off, and when it performs preparatory work for exports with important additional results but the results appear only later. In such a case, it is justified to permit a wage preference in addition to the reimbursement obligation, that is, after the attainment of the expected result the "debt" is repaid when the wherewithal exists.

It is essential to clarify in the realization of differentiation among enterprises and in adjustment to performance whether the differentiation should be made possible in the wage or only in share participation. On the basis of our analyses thus far, it has developed that the differentiation in earnings should be made possible both in wages and in share participation with due attention to the fact that the difference being created in the wage--as a consequence of the so-called base change--will be permanent.

In the past 3 years, the ratio of share participation has been considerably less than in 1975. The ratio of share participation fund as compared to wages was 11.4 percent in 1975 and 6.5 percent in both 1976 and 1978. Accordingly, yearend shares as compared to wages changed from 5.7 percent to 4.7 and 3.8 percent. A role was played in this by regulation (high progressive tax), moderation of the growth rate for profits and the effort by the enterprises to make the earnings increase into the base, to the extent possible, for the following year. This mobile component of incentive would become more stimulating if its proportion increased in earnings. The change serving this end needs to be carried out also in the regulation.

Taking the job occupational earning ratios as given, the differentiation among enterprises appears primarily in the increase in wages or earnings. A considerable differentiation among enterprises in the earning level can come about only as a result of differentiation over a number of years. This means that enterprises need persevering effective work in order for their workers to have an earning advantage as compared to workers in enterprises operating less efficiently.

3. In addition to the general principles of differentiation, it is also necessary to speak of extent. Frequently the requirement is formulated that, on the basis of practical or theoretical considerations, limits should be defined between which the lowest and the highest earnings, the variations in earnings among the enterprises, etc, can be developed and differentiated. It is not possible, and it is not advisable, to determine these concrete limits expressed in forints over the long range. Any kind of earning limit (such as are included in the wage listing systems) can be linked only to the economic possibilities of the given period and in general to the economic growth of a medium-range period.

On the other hand, the general characteristics of the extent of the earning ratios must be determined; over the long run this must be understood as economic policy and wage policy goals.

What extent of earning ratios should be permitted among the wage-development possibilities of the enterprises? Experience demonstrates that a variation and a spread of about 40-50 percent from the average annual wage development meets the requirements of wage-development differentiation for the performance requirement. A greater difference would lead to wage asymmetries between the enterprises and the branches which could be corrected only by central wage

measures. On the other hand, the realization of the 40-50 percent spread affords the possibility, even in the case of a nominal wage increase, for an enterprise that is operating well to assure that among its workers it may pay perceptibly better as compared to the pay of workers in other enterprises.

Let us continue with a comparison of enterprises. What ratios are justified in the earnings of managers at enterprises of differing size and importance and at cooperatives? The present (1977) earnings ratios in industry show that--in placing enterprises in six categories, that is, enterprises and cooperatives--the earnings of the managers in the special enterprises will exceed 2.2 times the earnings of the cooperative leaders in category six.

The ratios among the values are significant, and in our social relations they essentially express the difference existing in training and responsibility, particularly if we note that even within the individual categories there is a spread (that is, in a given concrete case a fourfold difference will occur). It is necessary to analyze, however, what kind of role there should be in the future in the shaping of the difference for basic wages according to entry and for allowances above the wage.

According to the evidence of general data, the ratio of earnings by managers within an enterprise is not dispersed enough. In 1977, the average earnings of administrators, chief engineers and head bookkeepers in industry exceeded approximately 1.5 times the average earnings of direct production managers, shop foremen and job foremen. This was exceeded 1.1 times by the average earnings of department and independent group managers, 1.15 times by those of workshop manager, plant and chief shop managers. A difference of 1.5 times between the earnings of the highest and lowest level managers is too little to make the earnings ratios of those on differing points of the managers' scale have an incentive effect with a proportional difference in the expected and actual performance.

The bulge is a consequence of the fact that in the past 8-10 years we have restrained the earnings increase of managers in the higher positions. This also braked the justified raise in the earnings of managers in the lower categories and employees with outstanding training.

In recent periods the earnings of skilled, semiskilled and unskilled workers have been, to be sure, leveled despite the fact that differentiation was a conscious effort of wage policy. From the aspect of performance-increase incentive this process--particularly among skilled workers--had an unfavorable effect. The leveling is explainable primarily in the increased earnings of unskilled workers and the reduction in the number of those willing to accept such work.

The ratio of earnings in industry, the construction industry, transportation as compared to the earnings of unskilled workers is 140-150 percent. It is less than this in agriculture and commerce. In the material branches of the

economy, we should put the difference at 60 percent on the basis of personnel distribution and the average possibility afforded by the wage schedule system.

The task of the wage policy in this area is to increase the material incentive of the highly qualified skilled workers performing appropriate work. The wage policy can satisfy this requirement only if we radically reduce the need for unskilled workers, for example, by technical development, organization, etc. In addition to all this, we must reckon with the fact that in certain areas there will be a continuing need for workers who accept undemanding, low-prestige jobs and whose earnings--for labor supply and demand reasons--will continue to increase dynamically in the future.

A relevant problem here is that the earning level of production managers as compared to workers' earnings has been low in the recent period. Thus, for example, in 1977 the ratio of wages for direct production managers was 123 percent as compared to skilled workers in industry, 117 percent in the construction industry, 109 percent in state agriculture, and 106 percent in transportation. If we consider that we are here comparing averages, we can conclude that the wage of a good skilled worker is hardly lower than that of a production manager. Therefore, the shop foreman assignment is not an attractive one for such a worker. And still, the direct production manager's position in work specialization is a key one, and, therefore, to avoid the danger of contraselection it is of basic importance to assure an appropriate earnings level. However, it is at the same time important to determine the proper performance requirement.

External Factors Influencing the Incentive Effect of Wage Computation

Factors outside the wage system significantly influence and modify the incentive effect of wages. We must know these factors and thereby promote the conditions for desirable operation of the wage system.

a) The realization of the incentive role of wages is closely related to the general manpower situation and to the general and special equilibrium problems of manpower supply and demand. In the period facing us, we must provide particularly intensive incentive for the rational use of manpower as well as the transformation or regrouping of manpower.

If harmony disintegrates between manpower supply and demand, the effort will be made at every level of the economy to acquire manpower with wages. This is happening among lathe operators and urban bus drivers as well as in preferred investments and in all enterprises where unskilled workers--in order to win them--are paid wages almost of the same level as skilled workers. This is also a characteristic kind of incentive but one which it would be well to renounce. In these cases the superior wages are not based on greater quantity and quality of work but on where the worker accepts a job. It may be that this latter circumstance cannot be of minor importance, but still we

must know that the distribution (at the macrolevel) of manpower or its hiring by means of wages (at the enterprise level) is not an effective method. Such actions induce movements that cannot be controlled, make requirements, control and discipline more lax, open the way to wage payments unaccompanied by performance, and all these things together weaken or make impossible the giving of incentive to effective work.

The establishment of a manpower balance is not basically a wage computation problem, but the wage system can ease stresses in the manpower situation. It can achieve this by providing incentive for rational management with live work: it does not hinder but promotes the development of the desired product structure; it makes possible and necessary the freeing and the relocation of superfluous manpower which cannot be effectively employed; and, with the development of wage and earning ratios, it promotes occupational choices and manpower mobility appropriate to the demands of the economy.

b) Successful operation of the wage system is influenced by the instruments of regulation and management. A strengthening in the degree of efficiency of the incentive is promoted by:

a) investment development policy which prefers the rational utilization of live work and solutions which require a low level of live work;

rapid elimination of the lag which has occurred in the field of mechanization and organization of the processes which serve and help production;

modernization of the production structure;

application of the withholding system which promotes the real evaluation of production factors;

the producer price system, for which it is a requirement from this point of view that the quality of the efforts by the enterprises and their activity should be faithfully reflected by profit relations and in general by those indexes to which we desire to link the development of wages;

in addition to the realization of the requirements for normative regulation it is necessary to have a support system which takes into account the wage and earning relationships of the subsidies granted in various forms.

The link between incentive and consumer prices is more direct than in the case of the foregoing list above. This is understandable since the change in consumer price directly influences the volume of goods and services that can be purchased with wages and earnings. The linking of the change in consumer prices and wages, and by virtue of this the development of real wages, is a task at the national economic level. It is at the macrolevel that they determine the extent of the average change for real wages. The change in the real wages of individuals and collectives from the national average can

and does vary. From the wage aspect, a part of the variation can stem from the varying wage-development possibilities of the enterprises, and another part from the earning differences supported by the performance of the individuals. The individual spread in real wages from the average--particularly at a time when the extent of the rise in real wages is low--means that there are some for whom real wages declined.

Since the possibilities for an increase in income, primarily in real wages, are minimal, the question is often raised nowadays whether it is possible to provide a worthy incentive, and can this requirement be emphasized under such circumstances. In my opinion, incentive has a role in every phase of economic growth. In other words, wage computation linked to performance must be realized at all times. Doubts about this derive from an outlook which has become widespread in Hungary that incentive can only be provided through an increment in wages and incomes. The most important incentive is or must be represented by properly developed earnings ratios. Of course, to this end it is necessary that we also use the following method of incentive: whoever does not perform his work appropriately must be placed in a different, lower sphere of work, or he should be separated; and the other way around, whoever works well and with responsibility should be put into a higher sphere of work.

Beyond this view it must also be seen that real wages which are stagnating or growing slightly express the situation in the country as a whole. This, however, must develop in such a way that the income of collectives in enterprises working efficiently is higher while the income of enterprise collectives producing uneconomically rises to a lower extent, and in the latter case may even decline. Moreover, within a given enterprise the personal income of individuals may also change in a varying manner in relation to performance. This means that both in an efficiently operating enterprise and in a less efficient one, a difference must be made in the individual wage increase in relation to performance. All this will make it possible for incentive to be realized in the framework of our material possibilities.

c) Incomes for which work is not done, or that are not in proportion thereto, influence significantly or moderate the incentive effect of wages. The effect of these income forms is already evident with career selection, showing those occupations as the advantageous ones that are linked to tips, gratuities and bribes. These income forms shape earning asymmetries of a sort that even distort the value judgment of the members of our society. The outlook has developed that it is not more and better work which makes it possible to arrive at material advantage, but cleverness. It puts a question mark on the role of training qualifications and responsibility in the shaping of earnings ratios.

Thus the restraining of incomes that distort the principle of distribution according to work is important and necessary not only from a sociopolitical but also economic policy point of view. The placing of these limits or restraints cannot be attained merely by conscious influence. In the different areas of the economy, too, we must undertake to carry out the necessary

organizational, economic and legal measures. From the economic and consciousness point of view alike, we regard bribes as the most harmful. This is one form of suborning, the source of corruption. We need to restrain this income acquisition possibility by all means. In respect to tips and gratuities, we must put an end, above all, to extortion attitudes and to frequently immoderate giving and taking.

d) The personal human attitude which may appear in the form of consumer, worker and manager attitudes has a more than negligible role. The desired forms of attitude may be influenced and even exacted by means of regulation, but a basic role should be attributed to assuring harmony between supply and demand, at the same time granting adequate room for the influence of consciousness, including political work.

In the attitude of the consumer and employee, everyone must recognize that every wage or forint of earnings must be worked for. Thus it is not only the increase in wages, not only variation from "model" pay selected by us which represents the awarding of work performed. It is in this spirit and concept, therefore, that the work must be organized and the working conditions assured at the enterprises and institutions. It must be made clear and also possible for the individual in every case to offer the maximum from his talent and capabilities: this is the basis of differentiation.

The employees (from manager to subordinate, for in some relation everyone is an employee) must become conscious of the fact that enterprise performance is not simply an adding up of individual performances. It is influenced by the economic environment and market possibilities as well. The latter factors are those which from time to time and in comparison to other enterprises modify the wage and earning possibilities of workers who regularly fulfill the requirements, and these the well-organized and well-coordinated work of the enterprise collective is called on to counterbalance and even to exploit.

Perhaps it is not an exaggeration to maintain that incentive and distribution according to work is the affair of society as a whole, but its practical realization places great tasks and responsibility primarily on the economic leaders. It is they who, in the framework of economic regulation, must develop the principles and practices of wage computation according to social demands in such a way that they will achieve maximum results in enterprise management. The managers must in all cases keep in mind the efficiency of management in the enterprise and the organizational unit, naturally in such a way that meanwhile the individual and the group can express activity most efficiently and most economically (that is, within optimum earnings relations).

It is necessary and important that in wage computation the manager should consider the work and the circumstances related to work. It is increasingly necessary to force into the background the outlook which wishes to realize sociopolitical viewpoints in the practice of wage computation. We must emphasize that the hiring and keeping of manpower is not only a question of wage, but a role is played outside of the wage computation itself by the

realization of the work circumstances that are provided, the social facilities, the cultural and sport opportunities, the workplace atmosphere, and plant democracy.

Daily we can convince ourselves that the wage is an indispensable instrument for providing the individual and the collective with incentive, but an increasing role is played also by nonwage factors, primarily social and moral factors. In our socialist society, which we also call the society of work and in which we always held in high esteem the role and importance of consciousness and shall always do so, this is an entirely natural and proper matter. The selection of the work shop and the expression of optimum performance is influenced from the individual aspect by the distance from the place of work; the traveling possibilities and circumstances; the nursery, kindergarten and health provisions; the work organization and the work circumstances within the enterprise, the atmosphere in the place of work, etc.

The human attitude and the possibility for individual "interest realization" have great importance. For example, whether a given job is recognized and respected in the collective or in the family environment. Does the work that is performed have perspective whether by promising a future or becoming a part of the work performed by new, modern technology? The thinking man requires that he should see the relationship and interdependence of his work with the tasks and results of the whole producer unit. Therefore, forums must exist where he can be informed and where he can give his opinion. At plant democracy forums the tie to, and the sense of responsibility for, the collective are strengthened. This is for the entire collective an important reserve from the incentive aspect.

The material and moral aspect of incentive together express their effect by strengthening each other; it is in this way that we can reach the highest degree of effect. The managers of the economic, social organs must be aware of this. To have these factors express their influence in a favorable direction, it is not enough to formulate demands; the conditions to carry them out must also be created for everyone in his own place.

6691
CSO: 2500

ENERGY, TRANSPORT SHORTAGES SAP CEMENT INDUSTRY

Warsaw ZYCIE GOSPODARCZE in Polish No 41, 14 Oct 79 pp 1, 8

[Article by Andrzej Chmielewski: "Benefits and Troubles"]

[Excerpts] It is one of the basic materials accounting of which is done centrally by the Planning Commission. In all comparisons of the level of economic development of countries, cement is mentioned alongside the output of electrical energy and sulfuric acid.

We are in the forefront of producers worldwide, in the first ten, while we have overtaken the United States and a number of other highly-developed countries in per-capita output. We have sufficiently satisfied the hunger for cement that in 1975 it was removed from the list of imported goods for the first time in many years. In 1972-1974 we bought more than 1.2 million tons abroad, primarily from capitalist countries.

In the present five-year plan the pace of investment is smaller, it is true, but nonetheless the appetite for cement is not decreasing. We still have a good deal of work to do on the infrastructure in broad terms: roads, preparation of sites for housing construction, regulation of water systems. The Visla program itself is absorbing more than 4 million tons of the material, and that of high quality. Expenditures on agriculture and the food economy which are being and will be made have a direct effect on the great requirement for cement. Our agriculture is in a stage in which it is absorbing a great deal of cement for reclamation of agricultural lands, road building and expansion of storage construction.

Further, there is the entire apartment-building program. What is its significance? The majority of residential areas are located at some distance from town centers. As a result of this it is necessary to build or rebuild roads and mains. The movement of construction to peripheral areas necessitates construction of an entire residential infrastructure, and capital investments on the municipal residential infrastructure are particularly large--sharpening, in particular, the appetite for cement.

By the end of the 1980's the requirement for cement will increase to about 30 million tons a year. There is on the whole no divergence of estimates of this requirement, for they are based on the same investment structure, on forecast technology and on the existing breakdown of sales of other building materials.

The year 1975 was a time of equilibrium with regard to cement, and even of incipient surpluses of it. Everything favored the assumption that in coming years it would be possible to speak of complete satisfaction of needs.

What Happened?

In 1971-1975, investment in the cement industry amounted to over 21.3 billion zlotys. The greatest growth was posted in 1974 (4.5 billion zlotys) and 1975 (8.1 billion zlotys). We recall that in 1966-1970 investment in this sector of industry was in the millions rather than billions of zlotys. Thus the injection of capital investment was immense. Nonetheless, the cement industry has great difficulties.

In 1976 cement deliveries to the market--primarily overseen by NIK [Supreme Chamber of Control]--amounted to only 86 percent of stated requirements (a shortfall of more than 923,000 tons); in 1977 they were 89.8 of requirements (a shortfall of 739,600 tons) and in 1978 81.9 percent (a shortfall of more than 1.4 million tons). For the socialized economy, shipments were 99.3 percent, 99.8 percent and 93.4 percent respectively. What has happened to the industry?

It is quite difficult to analyze the effectiveness indicators because of a lack of data. Nonetheless we can state that there was an increase in costs, resulting primarily from higher amortization costs and repayment of investment credits. In comparison with 1977, for example, the level of costs for the entire sector in terms of sales value at 1978 prices increased by 3.5 percent, amounting to an increase of 1.24 billion zlotys in absolute value terms. Costs for the Malogoszcz Cement Plant increased by 26.4 percent in this period, or by 250 million zlotys, while amortization costs increased by 29.7 billion zlotys. Costs increased by 9.7 percent or 264.7 million zlotys for the Opole Cement-Limestone Combine, while repayment of credits amounted to 203.7 million zlotys.

Thus we can say in roundabout fashion that the productivity of fixed assets has worsened rather than improving. At the same time we can state that the labor productivity of workers in the industrial group has improved, being 5.3 percent higher in 1978 than in 1977, while the fluctuation indicator has been high at 16 percent.

Unfortunately, we have not been able to make a complete calculation showing the effect of increased investment on production effectiveness. Has it produced savings, and what have then been? I am afraid that no one, even in the cement industry, has made this calculation. In an overall reckoning, of course, it would also be necessary to take into account the effect of increased cement production on other areas of the economy and their development capabilities, as well as the foreign trade situation. But this effect has unquestionably been positive.

On 27 September I tried to get some information from the Cement, Limestone and Gypsum Industry Association concerning the probable level of plan fulfillment. Its president, Engineer Stanislaw Drzazga, first made two telephone calls. The first concerned complete satisfaction of the requirements of 17 general construction associations. This requirement had to be absolutely satisfied. The other call concerned export, which must be pursued since the sales are extremely profitable. The cement brings about 30 dollars a tons, and the money is received as soon as the sacks are loaded on shipboard. But this is difficult, because production of class 350 and higher grades of Portland cement has been suspended. This is quite a dilemma: should we force cement in the lower quality categories on foreign purchasers or cease export entirely? There are perhaps other considerations, since there is great competition among producers and any lowering of quality might end our possibilities for export permanently.

"The installed production capacity," states president Drzazga, "is estimated as 25 million tons of cement a year. But complete utilization of capacity depends on the situation that develops in the economy. In the first quarter we had a good deal of trouble."

There was a shortage of 2.3 billion zlotys for performance of the plan. During this period production fell to 30 percent of capacity. The cement elevators were full. Between May and August the industry did a complete turnaround, producing more than 2 million tons a month. In September the situation worsened considerably and unfortunately it is deteriorating daily. Instead of the more than 2 million tons that was called for, monthly production is fluctuating between 1.5 and 1.6 million tons. It may be even less in the last quarter.

Among the main causes of this state of affairs, the following are mentioned first: shortfalls of electric power and fuel supplies and transport difficulties, with which is associated overfilling of the cement elevators and stoppages, breakdowns and defects.

Like every branch of industry, the cement industry has a fixed limit for electric power consumption. This is based on rather precise calculations of electrical power consumption by the equipment and machines installed in cement plants and by processes which require certain quantities of energy per unit output. Naturally, shortages in energy supply affect the entire economy. The State Power Distribution Agency recently established 20 levels of supply for radio communications, even during periods of minimum demand. In such a situation, rigorous methods of limiting the supply of energy for industry, and even in some cases for municipal and domestic uses, are employed.

Based on the established limit for energy consumption in a given period by the cement industry, planned shutoffs have to go into effect at the level of 40 MW. In practice the level is 80, and at so-called "peaks" it even reaches 160 MW. In such cases even inefficient shutoffs are implemented. For example, the cement mills are turned off, even though with repeated startups they use more than twice as much electricity as in continuous operations.

The norm for coal supplies in the cement industry is 180,000 tons. On 27 September the figure was barely 34,000 tons. On this day, about 50 percent of the daily shipments arrived. According to data from the association's production department, several cement plants which use coal as a process fuel are threatened with stoppages. Production may cease on any day. In addition, two of four cement plants which use fuel oil are in a similar situation. In addition to irregular deliveries, large variations in the value of the fuel coal are having a negative effect on utilization of productive capacities. Last year it amounted to 2,953 kilocalories per kilogram in certain periods. At the same time, according to data of the Institute of the Binding Construction Materials Industry, the use of process fuel with a calorific content below 5,600 kilocalories per kilogram leads among other things to decreased productivity of rotary kilns and increased heat consumption in the roasting of clinker, while disturbances arise in the operation of the rotary kilns and it becomes difficult to maintain the required clinker quality.

In the course of a day, the cement plants require 26,000-28,000 railcars. In actuality about 13,000 railcars are arriving at the unloading platforms--or up to 15,000 on good days. In the course of three quarters of last year, the means of shipping about 1.6 million tons of bagged cement were lacking. This placed a limitation primarily on the supplying of individual customers. But at the same time, in the first half of 1978, 32,441 railcars were held overtime in the cement, limestone and gypsum industry as a whole. These wagons were inactive for a total of 428,000 hours. The size of rail sidings at cement plants is not adapted to intensified commodity turnover, which results in breaches of loading discipline. There is not enough equipment for loading and unloading of large four-axle cars. Some cement plants lack the requisite storage facilities, which prevents them from building up supplies and maintaining a smooth loading process.

Every year 70 electric motors with a capacity of 4,500 kW need to be sent for repair, but last year a mere 10 motors were accepted for repair. The required spare parts, steel and castings are also unavailable. Last year the Zremba-Makrum Enterprises were to deliver 11,000 tons of spare parts, but the cement plants received only about 4,000 tons.

Is there cement or is there not? In the association I heard the opinion that there is not a shortage, even though there is not enough for everyone. The productive capacities of the sector--25 million tons--attest that we have made major investment efforts to develop this industry. This allows us to assume that we have settled the cement problem for some time to come.

Beyond electrical power supplies, shortages of which will be making themselves felt for some years, the other difficulties which the cement industry has can relatively easily be eliminated or their negative effects at least minimized. There is latent potential which we can think of utilizing even at present. This will entail certain expenses for the modernization of loading and unloading work and of sidings and unloading platforms, so as to minimize unjustifiable idle time for rolling stock. Bulk transport of cement should be increased. In the countries which are the biggest producers of this material, bulk transport of cement ranges from 60 to 70 percent, whereas here it is not quite 10 percent. This operation will however require construction and reconstruction of transfer stations.

The cement industry is obliged to maintain a smooth production rhythm from quarter to quarter: 25 percent in each quarter. Meanwhile, according to information from the Cement Sales Office, at the beginning and near the end of each year the enterprises come to a stop because the storage elevators are overfull. In the spring and summer months, on the other hand, the production capacities are overloaded because everyone is ordering cement. It might be advisable to consider whether seeming disruptions of the production rhythm might not benefit both the producer and the purchasers.

Clearly, the introduction of energy-conserving processes should be pursued. Although it will be necessary to wait several years for their effects, they are a necessity. Currently, only in the Gorazdz Cement Plant is there energy-conserving equipment, which uses 780 kilocalories per kilogram of cement. In other plants, the indicator ranges from 1,000 to 1,700 kilocalories. Further savings of energy are offered by cement production using the so-called "dry method." But there are also opponents of this process, who declare that the cement obtained from it has a large alkali content and that the production itself has a greater negative effect on the environment than the wet method. But we cannot escape from energy conservation.

It is because of energy difficulties that existing production capacities cannot be fully utilized. The main direction for development of this industry must aim primarily at introducing energy-conserving processes. This is the precondition for full discounting of the immense investment effort which we have made thus far.

9427

CSO: 2600

FERROUS METALLURGICAL CAPACITIES, 1975-80

Belgrade CELIK in Serbo-Croatian No 78/79, Jul 79 pp 11-13, 15-17

[Article by Dr Aleksandar Cavic, engineer: "Yugoslav Ferrous Metallurgical Capacities, Actual and Agreed Growth, and Level of Utilization"]

[Text] The Agreement on Development of Ferrous Metallurgy up to the Year 1980, which was published in SLUZBENI LIST SFRJ, No 2, 30 December 1977, gave figures on capacity for the technological phases of production and on their utilization for the socialist republics and Yugoslavia as a whole in 1975 as well as the level which should be achieved in 1980. A comparison and analysis of these figures with the respective figures for 1978 and 1979 indicates the present status of the capacities of the Yugoslav steel industry and the level achieved relative to the goals adopted in the agreement covering the period up to 1980.

Capacity for Coke Production

In Yugoslavia coke is produced in Bosnia-Hercegovina (Lukavac and Zenica) and also since 1978 in Croatia (Bakar). Table 1 shows capacity for coke production and the level of utilization of that capacity.

Table 1. Capacity for Coke Production and Its Level of Utilization

	<u>Bosnia- Hercegovina</u>	<u>Croatia</u>	<u>Yugoslavia</u>
Existing capacity, 1975 (according to the Agreement), thousands of tons	2,000	--	2,000
Planned capacity, 1980 (according to the Agreement), thousands of tons	2,700	850	3,550
Production capacity, 1978, thousands of tons	1,850	425	2,275
Use of capacity, %	98	61	91

Note: The production capacity of the Bakar Coking Plant is shown at 50 percent for 1978 because this coking plant was in operation only in the

second half of the year. The lower utilization of the capacity of the Bakar Coking Plant is the result of the initial run-in period. Coking plants are operating at a good level of utilization of capacity, constantly above 90 percent.

Table 2. Capacity for Production of Iron Ores and Utilization of Capacity

	<u>Bosnia- Hercegovina</u>	<u>Macedonia</u>	<u>Serbia</u>	<u>Yugoslavia</u>
Existing capacity, 1975 (according to the Agreement), thousands of tons	4,550	1,330	120	6,000
Planned capacity, 1980 (according to the Agreement), thousands of tons	9,550	1,330	120	11,000
Production capacity, 1978, thousands of tons	3,750	1,225	150	5,125
Use of capacity, %	90	27	31	73

The plan for construction of coking plant capacity is being fulfilled since the new coking battery at Zenica, envisaged by the plan in Bosnia-Hercegovina, is under construction.

Capacities for Production of Iron Ores

Iron ores are being produced in Yugoslavia in three republics: Bosnia-Hercegovina (Ljubija, Vares and Radovan), Macedonia (Tajmiste, Demir Hisar and Damjan) and Serbia (Suva Ruda). Ljubija and Vares account for 70 percent of the capacity of Yugoslav iron mines and are producing not only to meet the needs of the Zenica Mining and Metallurgical Combine, but also other consumers in the country, and a portion of their output is even exported from time to time. The mines other than Ljubija and Vares produce ore exclusively for their parent work organizations: Radovan for the Zenica Mining and Metallurgical Combine, the mines in Macedonia for the Skopje Mines and Steel Mill, and Suva Ruda for the Smederevo Metallurgical Combine. Table 2 gives a survey of capacity for iron ore production and level of utilization.

Production capacities of iron mines in 1978 were the same as at the beginning of the planning period--in 1975. Mine construction envisaged in Bosnia-Hercegovina under the agreement still has not begun, so that the plan for construction of mines up to 1980 will not be fulfilled.

Utilization of mine capacity varies considerably. It is highest at Ljubija and Vares and lowest at the mines belonging to the Skopje Mines and Steel Mill.

The mines in Bosnia-Hercegovina, which account for most of the country's production, are operating at a high level of utilization, better than 80

percent, and therefore the average utilization of the capacity of iron mines in Yugoslavia is above 70 percent.

Low utilization of capacity at the Macedonian mines is because of the low consumption of these ores at the Iron Smelter of the Skopje Mines and Steel Mill, and low utilization of capacity at the Suva Ruda Mine is the consequence of changes in the composition of the ore from the quality anticipated in the project plan.

Capacities for Production of Iron and Agglomerated Concentrates

Iron is produced in Yugoslavia in all the republics except Montenegro: at the Zenica, Vares, Ilijas, Sisak, Skopje, Jesenice, Store and Smederevo steel mills. The principal product is white iron in blast furnaces (about 80 percent of total production) for steelmaking.

Some of the white iron is produced in electric-reduction furnaces, and gray iron (about 10 percent of total production) is produced in the blast furnace and electric-reduction TH furnaces.

Table 3 gives a survey of capacities for iron production and the level of their utilization.

Table 3. Capacity for Production of Iron and Utilization of Capacity

	<u>Bosnia- Herce- govina</u>	<u>Mace- donia</u>	<u>Slo- venia</u>	<u>Serbia</u>	<u>Croatia</u>	<u>Yugo- slavia</u>
Existing capacity, 1975 (according to the Agree- ment), thousands of tons	1,240	510	250	720	250	2,970
Planned capacity, 1980 (according to the Agree- ment), thousands of tons	2,200	510	250	1,500	250	4,710
Production capacity, 1978, thousands of tons	1,203	430	291	720	235	2,881
Use of capacity, %	84	47	72	64	81	72

The agreement calls for construction of two blast furnaces by 1980. However, this plan will not be altogether fulfilled. The blast furnace at Zenica (IV) has been built, but its capacity is not shown in Table 3, since this furnace began iron production at the beginning of 1979. The other blast furnace which was to be built under the agreement is only in the initial phase of construction and will not be completed by 1980.

Average utilization of the country's iron-making capacity is rising every year and in 1978 surpassed 70 percent. Analysis of utilization of capacity for white and gray iron production in blast furnaces and TH furnaces indicates better utilization of capacity in blast furnace production of white

iron (better than 75 percent in 1978). The best utilization of capacity in gray iron production in fact was higher than 80 percent. The lowest level of utilization of capacity (about 50 percent) was for electric-reduction TH furnaces at the Skopje Mines and Steel Mill, which was because of difficulties in achieving the technology for iron production called for in that steel mill's design. The electric-reduction TH furnaces at the Skopje Mines and Steel Mill have a share of about 15 percent in the country's total capacity. The blast furnace at the Smederevo Metallurgical Combine, whose share is about 25 percent in Yugoslav iron production capacity, also had a lower utilization than the national average. The lower utilization of this unit resulted because the production cycle has not been completed at that steel mill.

Agglomerate production is related to iron production and occurs at the same location as iron production. There is no production of agglomerates for the market, nor any production for storage, since the entire output is used immediately in blast furnaces and electric-reduction furnaces. The principal process for agglomerating ore in Yugoslavia is sintering (about 98 percent of total capacity). There is only one pelletizing operation, which has a quite small capacity, and that is at the smelter of the Skopje Mines and Steel Mill.

Most of the capacity for agglomeration of ore (over 96 percent) has been installed to meet the needs of white iron production.

The agreement on development up to 1980 did not state agglomeration capacity, which in 1975 was about 4.2 million tons. By 1978 this capacity had increased to about 4.5 million tons when the agglomeration plant was put into operation at Skopje, and in 1979 a new agglomeration plant was put into operation at Zenica.

Average utilization of agglomeration plant capacity in Yugoslavia was about 60 percent in 1976 and 1977 and showed a tendency to improve in 1978, when it reached about 65 percent. This advance was mainly achieved because of the higher productivity of the agglomeration plant at Smederevo. However, average utilization of agglomeration plants in our country is still low. Better utilization of capacity depends on an increase in the productivity of units for iron production and better maintenance of the overall system of machinery for handling, preparation and agglomeration of the ore.

Steel-Making Capacity

In Yugoslavia steel is produced in all the republics: at the Zenica (Bosnia-Herzegovina), Niksic (Montenegro), Sisak and Split (Croatia), Skopje (Macedonia), Jesenice, Ravne and Store (Slovenia) and Smederevo (Serbia) steel mills. The breakdown of units with respect to process is keeping pace with present-day trends, since the share of LD converter steel with continuous pouring is increasing in total steel production, the share of open-hearth furnaces is decreasing, and the relatively high share of electric-arc

furnaces is being maintained. The representation of the various processes in steel production and available capacities in 1978 was as follows: LD converters 48 percent, open-hearth furnaces 32 percent and electric furnaces 20 percent.

Table 4. Capacity for Production of Converter Steel and Level of Utilization

	<u>Bosnia- Hercegovina</u>	<u>Macedonia</u>	<u>Serbia</u>	<u>Yugoslavia</u>
Existing capacity, 1975 (according to the Agreement), thousands of tons	--	800	840	1,640
Planned capacity, 1980 (according to the Agreement), thousands of tons	1,650	800	1,550	4,000
Production capacity, 1978, thousands of tons	1,100	748	840	2,688
Utilization of capacity, 1978, %	52	29	31	39

Table 5. Capacity for Production of Open-Hearth Steel and Level of Utilization

	<u>Bosnia- Hercegovina</u>	<u>Slo- venia</u>	<u>Serbia</u>	<u>Croatia</u>	<u>Monte- negro</u>	<u>Yugo- slavia</u>
Existing capacity, 1975 (according to the Agreement), thousands of tons	980	450	100	280	80	1,890
Planned capacity, 1980 (according to the Agreement), thousands of tons	980	450	100	340	--	1,870
Production capacity, 1978, thousands of tons	980	430	95	340	--	1,845
Utilization of capacity, 1978, %	79	81	99	82	--	81

In the survey below we give steel-making capacity according to the Agreement on Development of Ferrous Metallurgy in the 1976-1980 Period and capacity in 1978, along with the level of utilization of these capacities, as follows: for converter steel (Table 4), for open-hearth steel (Table 5), for electric steel (Table 6), and also the total for all steel-making capacities (Table 7).

The agreement on development up to 1980 called for a considerable increase in steel-making capacity. This increase was expected from construction of converter steel mills at Zenica and Smederevo. These planning targets have

been achieved only partially. Phase I of the steel mill at Zenica has been put into operation, but at Smederevo there has been no changes since 1975. On the basis of decisions taken to postpone certain investment projects, we can conclude that the capacity of converter steel mills will in 1980 be at the 1978 level of construction. The agreement covering the period up to 1980 did not foresee any sizable investment in open-hearth and electric steel mills, except to replace the open-hearth furnace and increase electric steel capacity at Niksic and reconstruction of the open-hearth furnace at Sisak. On the basis of the pace of progress in carrying out the investment projects up to now and the production capacities already attained, we can expect that the planning targets for 1980 will be achieved in this field of steel production.

Table 6. Capacity for Production of Electric Steel and Level of Utilization

	<u>Bosnia- Herce- govina</u>	<u>Mace- donia</u>	<u>Slo- venia</u>	<u>Ser- bia</u>	<u>Cro- atia</u>	<u>Monte- negro</u>	<u>Yugo- slavia</u>
Existing capacity, 1975 (according to the Agreement), thousands of tons	20	300	510	10	110	100	1,050
Planned capacity, 1980 (according to the Agreement), thousands of tons	20	300	510	20	110	300	1,260
Production capacity, 1978, thousands of tons	27	225	512	7	120	220	1,111
Utilization of capacity, 1978, %	106	67	85	91	101	70	81

Table 7. Total Steel-Making Capacity and Level of Utilization

	<u>Bosnia- Herce- govina</u>	<u>Mace- donia</u>	<u>Slo- venia</u>	<u>Serbia</u>	<u>Cro- atia</u>	<u>Monte- negro</u>	<u>Yugo- slavia</u>
Existing capacity, 1975 (according to the Agreement), thou- sands of tons	1,000	1,100	960	950	390	180	4,580
Planned capacity, 1980 (according to the Agreement), thousands of tons	2,650	1,100	960	1,670	450	300	7,130
Production capacity, 1978, thousands of tons	2,107	973	942	942	460	220	5,644
Utilization of capac- ity, 1978, %	65	37	83	38	87	70	61

According to the Agreement on Development of Ferrous Metallurgy for the Period 1976-1980 utilization of steel-making capacity in Yugoslavia averaged 63 percent in 1975. In that year capacity in Bosnia-Herzegovina and Croatia were completely utilized. Capacity was utilized at higher than 90 percent in Montenegro and above 80 percent in Slovenia. Utilization of capacity was very low in Serbia (16 percent, since this was the first year of operation of the converter steel mill in Smederevo) and in Macedonia (35 percent). During the 4 years that have followed the situation with level of utilization of capacity has not undergone essential change, except that new capacities have been put into operation at Zenica and Niksic, bringing about a certain drop in the level of utilization of capacity at those steel mills.

Average utilization of steel-making capacity in Yugoslavia was about 60 percent in 1978. Analysis of utilization of capacity by the various processes shows that the average is lowered by low utilization of steel-making capacity in LD oxygen converters. Average utilization of capacity is over 80 percent for open-hearth and electric steel production, and this can be taken as an optimum level of utilization of capacity for that type of production.

Utilization of capacity in production of LD converter steel is low on the average, but it is rising every year (17 percent in 1976, 27 percent in 1977 and 39 percent in 1978). This shows that in general the problem comes down to attaining rated capacity at new facilities, though there are differences in the growth rate of the level of utilization of capacity from steel mill to steel mill. The fastest growth rate of utilization of converter capacity is at the Zenica Steel Mill; it is somewhat slower at Smederevo, and it is staying at the same level at Skopje. The growth of the level of utilization of converter steel-making capacity at Smederevo is limited because construction of the installation is not complete and because the steel cannot undergo further processing within the steel mill because of delays in building the hot rolling mill, and it is also limited at the Skopje Mines and Steel Mill. In addition to the incompleteness of the operation, the low productivity of steel-making units results from technological and other production difficulties.

Capacities for Production of Steel Products

The Agreement on Development of Ferrous Metallurgy in the Period 1976-1980, though it covered the previous manufacturing phases, did not include capacities for production of finished steel products. The agreement only estimated Yugoslavia's needs for finished steel products in 1975, 1980 and 1985. These figures were 3.56, 5.2 and 6.7 million tons per year. The distribution of consumption of steel products by product groups in 1980 and 1985 was estimated: shapes 42 percent, flat products 48 percent and other products 10 percent. Table 8 shows the projected needs for steel products in 1980 compared with total production capacities and actual production and level of utilization of capacities for flat products, shapes and other products in 1978. Table 9 also shows average level of utilization of capacity for all steel products by republics and provinces in 1976 and 1978.

Table 8. Capacity for Production of Steel Products and Level of Utilization

	Product Group			Total Steel Products
	Flat Products	Shapes	Pipe and Other	
Projected needs (according to the Agreement), 1980, thousands of tons	2,500	2,180	520	5,200
Production capacity, 1978, thousands of tons	2,650	3,260	690	6,600
Actual production, 1978, thousands of tons	1,336	2,148	516	4,000
Utilization of capacity, 1978, %	50	66	75	61

The figures in Tables 8 and 9 are average results for the following work organizations: in Bosnia-Herzegovina, Zenica and Gorazde for shapes, Banja Luka for flat products and Derwent for pipe; in Montenegro, Niksic for shapes and flat products; for Croatia, Split, Kumrovec and Karlovac for shapes, Sisak for flat products and pipe and Labin only for pipe; for Macedonia, Skopje for flat products and Kumanovo for pipe; for Slovenia, Jesenice for shapes and flat products, Ravne, Store and Batuje for shapes and Alpos-Sentjur for pipe; for Serbia, Aleksinac, Svetozarevo and Futog for shapes, Smederevo for flat products and Urosevac for pipe.

Estimating the level of utilization of capacities of rolling mills is from the methodological standpoint more complicated than for the prior phases of manufacture, since in most cases it is not possible to obtain finished steel products from one further manufacturing process, i.e., by passing through one rolling mill. Total capacities of rolling mills are about twice as great (depending, of course, on the type of production and product mix) than the actual output of those rolling mills for the market as given in Table 8. The index of the ratio between total capacity and commercial capacity for the system of rolling and manufacturing facilities of the Yugoslav steel mills averaged 1.7 and 1.95 for all the steel mills between 1976 and 1978.

Installed capacity in terms of production for the market of rolling mills and other manufacturing facilities at the beginning of 1978 exceeded the estimated needs for consumption of steel products in 1980. It is estimated that total capacity for commercial production of steel products was about 4.8 million tons at the beginning of the current planning period (in 1975), so that the capacity for flat products and pipe available at that time, assuming 100-percent utilization, was capable of meeting the planned needs for 1980. Total capacity for shapes in 1975 was about 20 percent below the planned need for these products in 1980. Rolling mills producing structural steel operated in 1975 at optimum utilization of capacity, about 83 percent, while rolling mills producing flat products had low utilization of capacity (between 30 and 40 percent).

As part of fulfillment to date of the Medium-Term Plan for Development of Ferrous Metallurgy in the Period 1976-1980 large rolling mill installations have been put into operation, as follows: at Zenica a system of rolling mills for structural steel with a total capacity of about 3 million tons, at Jesenice a cold rolling mill with a capacity of 115,000 tons, and a pipe rolling mill at Sisak with a capacity of 75,000 tons. Thus the production capacities for commercial production of steel products reached 6.6 million tons in 1978, as shown in Table 8. In addition, in 1978 and 1979 new capacities were put into operation at Niksic (a blooming mill with a capacity of 200,000 tons) and at Smederevo (a hot rolling mill with a capacity of 800,000 tons). These facilities are not shown in Table 8.

Some production capacities were built outside the integrated cycle of the steel mills, and steel products are produced in those work organizations on the basis of purchased semifinished products, mostly imported. These capacities represent about 10 percent of total capacity as given in Table 8, and in 1978 their share in total output was over 11 percent. Capacities outside the integrated cycle have particularly strong representation in the production of seam pipe and they account for about 45 percent of total installed capacity for pipe production in Yugoslavia. The Agreement on Continuity in Construction for Development of the Production of Ferrous Metallurgy After 1980 envisages that construction of capacities outside the integrated production cycle, which is based on imported processing materials, will be more difficult.

Table 9. Use of Capacity for Production of Steel Products by Republics and Autonomous Provinces

<u>Republics and Autonomous Provinces</u>	<u>Use of Capacity, %</u>	
	<u>1976</u>	<u>1978</u>
Bosnia-Herzegovina	84	58
Macedonia	34	48
Slovenia	63	72
Serbia	48	76
Serbia proper	23	71
Kosovo	97	83
Vojvodina	86	94
Croatia	63	74
Montenegro	70	71
Yugoslavia	58	61

Utilization of capacity for production of steel products by product groups and location (Table 9) shows that the drop in average level of utilization of capacity in 1977 occurred because of a sudden drop in the level of utilization of capacity for production of shapes: from 79 percent in 1976 to 55 percent in 1977. This occurred because large new capacities were being run in at the Zenica Steel Mill. The rise in the productivity of this new system at Zenica, which consists of three rolling mills, is proceeding normally,

as shown by the considerably improved level of utilization of capacities for shapes in 1978, averaging about 66 percent. We can expect this trend to continue in the period to come. Utilization of capacity for pipe production ranged at the level of 60-65 percent in 1976 and 1977, and then improved considerably in 1978, reaching a level of 75 percent.

The lowest level of utilization of capacity for production of steel products is in the group of flat products. Between 1975 and 1978 there was an improvement in the level of utilization of capacities for production of cold-rolled and hot-rolled flat products from about 30 percent to 50 percent, but the level of utilization of capacity achieved is still low. A further increase in utilization of these capacities will probably take place at a slower rate in spite of the growing need for sheet and the high level of imports (in 1978 flat products accounted for 57 percent of total imports of finished steel products). Since an obstacle lies in the present lag of capacity for raw steel production behind the capacity for rolling mills.

Comparative Survey of Utilization of Capacity in the Yugoslav Steel Industry and Certain Other Countries

The Agreement on Development of Yugoslav Ferrous Metallurgy up to the Year 1980 estimated that production should be brought up to a level of 85-90 percent of capacity envisaged in the agreement. This provision accordingly represents the planned level of utilization of capacity, and it is worthwhile to set this and the actual level of utilization of capacity in our steel industry against the corresponding foreign figures.

Table 10 gives figures on utilization of capacity in the steel industry of the EEC and the United States.

Table 10. Average Utilization of Capacity in the Steel Industry of the European Economic Community and the United States

Phase of Production	Level of Utilization, %					
	1967	1974	1975	1976	1977	1983
Iron	79	87	65	66	61	--
Steel	80	87	66	68	63	73
LD			65	66	62	
Open-hearth	79		67	68	61	
Electric	82		74	76	71	
Steel products		79	57	60	57	67
Light structural steel		79	61	62	54	67
Wire		83	55	62	58	62
Coils		82	55	68	66	80
Heavy sheet		81	63	52	48	64
HV sheet		76	53	64	63	72
United States, total utilization*					81	

* The figure given is for 1978 and was taken from MET. BULL., No 6378, 30 March 1979, p 35.

Sources for Table 10: EUROSTAT, No 2, 1975; INVESTMENT IN THE COMMUNITY COAL MINING AND IRON AND STEEL INDUSTRIES, European Coal and Steel Community, October 1978; and "General Objectives for Steel 1980, 1985 and 1990," CEC, 20 April 1978.

In analyzing the figures in Table 10, we should note that they pertain to three essentially different time periods. The first period--1967 and 1974--represent a time of real boom on the world steel market, and the productivity achieved in that period represents the maximum technical capability of units in the steel industry of the most highly developed western countries. In other words, these are the upper optimum areas in utilization of capacity. In that period capacity for iron and steel production were used at a level of 80-87 percent, while rolling mills operated at a lower level of utilization, rarely exceeding 80 percent. The second period, running from 1974 to 1978, was a period of crisis for this industry in the western countries, when for market reasons it was not possible to achieve a level of utilization higher than 60-70 percent of capacity. Utilization of capacity at 80 percent was achieved in 1978 in the United States, where the market was not so greatly affected by the crisis situation as in the other regions of the western world. The third period--1983--represents a projection of future utilization of capacity in the countries of the European Economic Community.

On the basis of these figures, which give the results of the most favorable and also adverse conditions for production and marketing, one can conclude that in planning production in ferrous metallurgy one should assume that there must be a reserve of about 20 percent of installed capacity, i.e., that the optimum level of utilization of capacity is about 80 percent.

Figure 1 gives a graphic representation of the level of utilization of capacity in the Yugoslav steel industry in 1978 by phases of production relative to the planned 85-90 percent utilization given in the agreement and optimum utilization of capacity, which is 80 percent.

Utilization of capacity in Yugoslavia's ferrous metallurgy drops as we move from primary phases to the final production phases. The best utilization of capacity is about 90 percent in coke production. Utilization of capacity of iron ore mines and iron smelteries is at an average level of about 70 percent. Since the optimum level of utilization of capacity in ferrous metallurgy is about 80 percent, this means that unused potential is estimated at about 10 percent in these primary capacities.

The lowest utilization of capacities is in steel mills and rolling mills, where it averages about 60 percent. An analysis of utilization of steel-making capacity and capacity for steel manufactures shows that low utilization of capacity in our steel industry is concentrated in two groups of plants in oxygen converter steel production, where it is 39 percent, and in the production of flat steel products, where it is 50 percent. Consequently, potential capacity for production of these products is sizable.

Utilization of capacity for production of open-hearth and electric steel is good and exceeds 80 percent. Utilization of capacity of rolling mills producing structural steel is temporarily inadequate, at about 65 percent, because new capacities are being run in, but it will soon rise to the optimum level. Utilization of capacity in pipe production is also good and amounts to about 75 percent.

The principal reason for the low utilization of capacity in Yugoslavia's ferrous metallurgy are the poor correlation between the phases of production in terms of capacity and the existence of bottlenecks in production. This occurs because construction in the various phases is not synchronized, because capital investment projects are built slowly, and because facilities are put into production before they are completed. When we take into account that on the average the level of utilization of capacity is the same for steel mills and rolling mills, though considerable amounts of semifinished products are imported (about 1 million tons annually), we see the total surplus of capacity which the rolling mills have over the capacity of the steel mills. A comparison of the figures in Tables 7 and 8 shows that the production capacity of rolling mills is about 1 million tons greater than that of steel mills in 1978. However, this need not mean that the capacities of rolling mills are larger than the demand of the market, since our country is importing not only semifinished products, but also considerable quantities of finished steel products. (For example, in 1978 930,000 tons of finished products were imported, as follows: 57 percent flat products, 34 percent shapes, and the other 9 percent pipe.) Of course, better utilization of capacity of certain rolling mills along with a better solution for the supply of semifinished products might reduce some portion of these imported finished products. We can conclude that capacities for the production of steel (which are still operating at a low level of utilization), and accordingly for the production of iron and especially iron ore, are inadequate to meet the needs of manufacturing plants. When we analyze the level of utilization of the capacity of blast furnaces, which is about 10 percent greater than utilization of the capacity of steel mills, knowing that the entire output of white iron is consumed in steel mills, we can even quantitatively determine the lag in the development of capacities for ore and iron production behind the capacities of steel mills. The principal reasons for low utilization of capacity lie in these obvious discrepancies between phases, which are even more pronounced when we take the steel mills one by one.

Low utilization of capacity in our ferrous metallurgy is a lasting phenomenon and is characteristic of the entire product line. Factors significant to the low utilization of capacity are technological problems in realizing the production cycle as designed, poor organization of production, inadequate planning and guidance of development and investments, low availability of trained personnel and underutilization of their knowledge.

Irregular and inadequate supply of both imported and domestic processing materials is also conducive to underutilization of capacity, which is understandable in view of the discrepancy between phases.

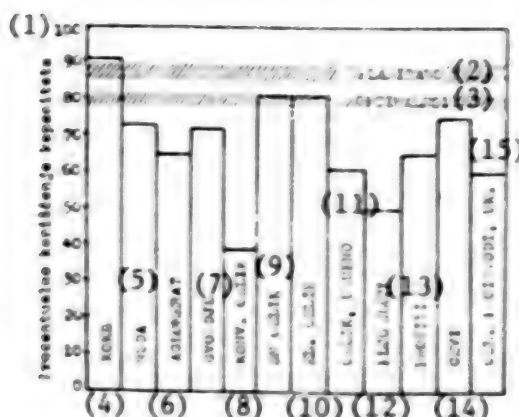


Figure 1. Level of utilization of capacity by phases of production in 1978 relative to the planned and optimum range.

- Key:
1. Utilization of capacity, in percentage
 2. Planned
 3. Optimum
 4. Coke
 5. Ore
 6. Agglomerate
 7. Iron
 8. Converter steel
 9. Open-hearth steel
 10. Electric steel
 11. Steel, total
 12. Flat products
 13. Shapes
 14. Pipe
 15. Steel production, total

The period of debugging the production process and starting up new capacities also tends to lower utilization of capacity. Especially since the steel mills have for quite a few years been large construction sites burdened with many problems related to that situation.

Low production because of sales difficulties is the principal reason for the lower utilization of capacity in the steel industry of the West. However, in Yugoslavia market factors are not the cause of low utilization of capacity. Domestic demand, and that is the principal market for our ferrous metallurgy, has mainly been very intensive over this period. In the coming period, when there will be quite a considerable increase in the volume of steel production, the influence of the fit between the product mix and the technical characteristics of products, on the one hand, and the requirements of the market on the other might become considerably more manifest as a factor contributing to low utilization of certain capacities.

Prospects for Future Development

An assessment of fulfillment of the Agreement on Development of Ferrous Metallurgy in the Period From 1976 to 1980 has been given by phases of manufacture in the discussion above.

Figure 2 gives a graphic representation of the capacities of the principal production phases according to the agreement and according to the actual situation in 1979, and a survey of steel-making capacities by process and capacities for production of steel products (by product groups) is given in Figure 3.

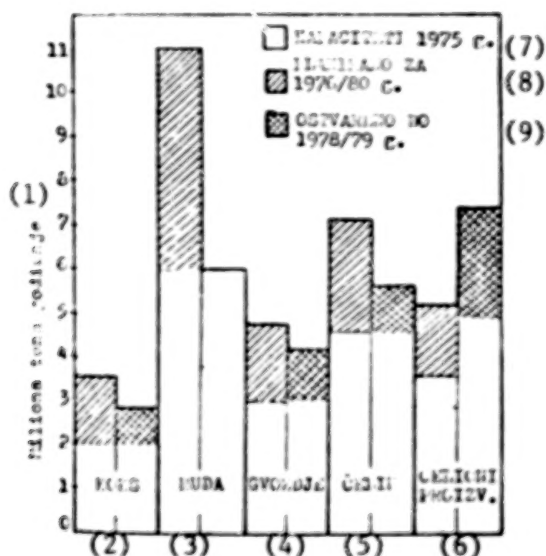


Figure 2. Capacities of the principal manufacturing phases according to the 1976/80 agreement and the actual situation in 1978/79.

- Key:
1. Annual output, millions of tons
 2. Coke
 3. Ore
 4. Iron
 5. Steel
 6. Steel manufactures
 7. 1975 capacity
 8. Planned for the 1976/80 period
 9. Achieved before 1978/79

The Bakar Coking Plant is shown at full capacity; total iron smelting capacities have been increased by the capacity of the new 2,000-cubic-meter blast furnace at Zenica, and the capacity for the production of steel products has increased by the capacity of the hot rolling mill at Smederevo for wide strip. In the case of steel manufactures, as we have already emphasized, the planned range does not signify production capacities, but estimated demand.

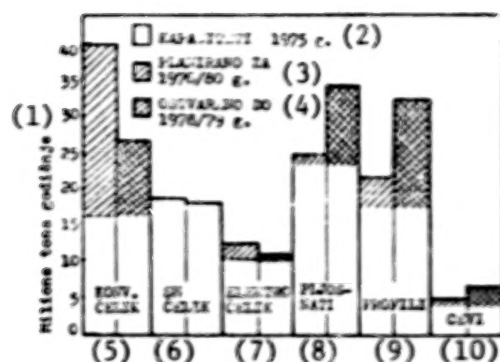


Figure 3. Capacity for production of steel and steel manufactures according to the 1976/80 agreement and the actual situation in 1978/79.

- Key:
1. Annual output, millions of tons
 2. 1975 capacity
 3. Planned for the 1976/80 period
 4. Achieved before 1978/79
 5. Converter steel
 6. Open-hearth steel
 7. Electric steel
 8. Flat products
 9. Shapes
 10. Pipe

The discrepancies from the planned capacities are considerable in terms of the degree of completion of plant and equipment, which means that the problem of discrepancies between phases in terms of capacity, with the accompanying phenomena such as poor utilization of capacity in certain phases of production and importation of raw materials and semifinished products, will persist even in the coming period of development. Capacities of the primary phases of production have been developing slower than the planning expectations. The fact that no iron mines have been built at all is particularly critical in this regard. The capacities of the final phases have been built even now in a volume which exceeds the demand for finished steel products in 1980 assumed by the planners.

On the other hand the capacity of the domestic market to absorb steel products, taken as a whole, is lagging behind the expectations of the planners. If we suppose a uniform growth rate of the demand for finished steel products in the period between 1975 and 1980, then 1978 consumption ought to have been about 4.5 million tons, while actually the domestic market consumed about 4.2 million tons of steel products in that year.

However, these are the overall results, and they are essentially affected by the prolonged underutilization of capacity for production of flat products. When we take shapes and pipe, we get a different picture, since in 1978, as shown by Table 8, production and consumption were at the level planned in 1980.

Table 11. Installed Production Capacities for Steel Products, in thousands of tons

	Product Group			Total Steel Products
	<u>Flat Products</u>	<u>Shapes</u>	<u>Pipe and Miscellaneous</u>	
Possible 1978 production, assuming 80 percent utilization of capacity	2,120	2,610	550	5,280
1979, production capacities	3,450	3,260	690	7,400
1985, anticipated demand	3,220	2,810	670	6,700

The principal preconditions for realizing optimum production in rolling mills and other manufacturing facilities in the coming period are higher productivity of converter steel mills, installation of additional units in steel mills, faster construction of blast furnaces already projected and an especially urgent opening of new capacities for the production and beneficiation of iron ores. These should be the principal areas for development of our steel industry in the coming period.

It is certain that the organized market, which is assured on a long-term basis, does have a favorable influence on development and utilization of capacity in ferrous metallurgy. This should be the direction pursued by conclusion of self-management accords concerning division of labor and production programs among steel producers, conclusion of agreements to secure ore and achieve mine construction, and also the corresponding self-management accords between producers and the principal consumers of the products of ferrous metallurgy. These agreements and accords have been envisaged by the Agreement on Development of Yugoslavia's Ferrous Metallurgy in the Period 1976-1980, but they have been late in coming, which undoubtedly is having an adverse effect on utilization of capacity in all phases of production and is making it more difficult to establish true proportions in the future development of the steel industry.

7045

CSO: 2800

END

END OF

FICHE

DATE FILMED

November 16, 1979

RRB